County Borough of Derby.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE

YEAR 1908,

BY

Albert E. Brindley, M.D., B.Sc., D.P.H., &c.,

Medical Officer of Health, Medical Superintendent of the Borough
Isolation Hospital, and Medical Officer to the
Education Committee.

Derby:
J. W. Simpson & Sons, Ltd., Printers, Albert Street.

County
Borough of Derby.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE

YEAR 1908,

BY

Albert E. Brindley, M.D., B.Sc., D.P.H., &c.,

Medical Officer of Health, Medical Superintendent of the Borough
Isolation Hospital, and Medical Officer to the
Education Committee.

Derby:
J. W. Simpson & Sons, Ltd., Printers, Albert Street.

PUBLIC HEALTH DEPARTMENT,
FORD STREET, DERBY,
MAY 3RD, 1909.

TO THE

Chairman and Members of the Sanitary Committee.

GENTLEMEN,

I beg to submit my first Annual Report on the Health and Sanitary Condition of your Borough during the year 1908, this being the 32nd Annual Report of the Medical Officer of Health. One unsatisfactory feature is the record of the continued prevalence of Diphtheria which has taken up a very considerable proportion of the time of the Health Officials since the commencement of my duties as Medical Officer of Health in October. This disease is chiefly spread through personal contact and somewhat close personal contact is necessary in most cases for such spread. As might be expected from the great facilities that are afforded for this close personal contact our Public Elementary Schools are the chief centres for the spread of Diphtheria in Derby. At the same time, the elementary fact should not be forgotten that infectious diseases are introduced into schools from the homes of the scholars, hence the schools, themselves, should not be unfairly blamed either in respect of structure or management, when outbreaks of infectious diseases occur among school children. It might be expected that the new system of Medical Inspection of School Children would do something to check the spread of such diseases as Measles and Diphtheria through the agency of schools, but I cannot anticipate from it any very substantial results in this direction. In my opinion our efforts must be more directed to dealing with the cases *in the homes* before they are able to get back to school; an intimate association of the work of the School Attendance Officers with that of the Health Officials is absolutely necessary if any very good results are to be obtained in checking the spread of Measles, Diphtheria, etc., and thus maintaining both improved health and improved attendances of the scholars. The abolition of the grant for the exclusion of individual children which obtained in the older Education Code is to be greatly regretted as a most reactionary procedure, and it tends to put a premium upon the encouragement of epidemics and consequent school closure as a whole, rather than the prevention of extensive outbreaks of infectious diseases by the exclusion of individual infectious scholars or classes at the outset.

Another important question which will require increased attention in the future is the provision of a Pure Milk Supply, and fresh legislation on this point is awaited with interest.

The vital statistics for the year are as a whole very satisfactory, the death rate (13.2) is the lowest on record, as is the infantile mortality (109), while the zymotic rate is with one exception (the rate for the year 1903) the smallest in the history of the Borough. Other gratifying features are (a) the deaths from Scarlet Fever only numbered two throughout the year (and this is a record for the town), the total number of cases reported being the smallest for 21 years. (b) the number of cases of Enteric Fever notified in 1908 was only 39, also the lowest recorded; this disease is so frequently associated with defective sanitation that this record is especially gratifying to the Sanitary Inspectors. (c) The number of deaths from cancer shews no increase, but a slight diminution.

The Notification of Births Act came into operation early in January, and has worked on the whole very satisfactorily, the fact alone that no fewer than 125 cases of ophthalmia in infants were discovered as the result of its operation, without doubt justify its adoption. In 16 of these cases the disease was of a very serious nature and would doubtless have caused more or less impairment of vision (if not permanent blindness) to its unfortunate victims.

I am, Gentlemen,

Yours obediently,

ALBERT E. BRINDLEY,

Medical Officer of Health.

County Borough of Derby.

SANITARY COMMITTEE.

Alderman WILLIAM BLEWS ROBOTHAM, Mayor.
Councillor R. LAURIE, M.D., J.P., Chairman.

Councillor ARNOLD-BEMROSE, D.Sc., J.P.
" BERRY.
" DOMLEO.
" EATON.
" HASLAM.

Councillor HEXTALL, J.P.
" INNES.
" LONGDON, J.P.
" NEWLAND.
" NEWBOLD.

Hospital Sub-Committee.

Councillor BERRY.
Councillor EATON.
" INNES.

Councillor LAURIE, M.D., J.P.
" NEWLAND.

Sub-Committee to deal with Housing and Tuberculous Milk.

Councillor LAURIE, M.D., J.P., Chairman.
Councillor EATON.
Councillor HASLAM.

SANITARY STAFF.

Medical Officer of Health and Medical Officer to the Education Committee.

ALBERT E. BRINDLEY, M.D., B.Sc., D.P.H., &c.

Assistant Medical Officers.

ELWIN H. T. NASH, D.P.H., M.R.C.S., L.R.C P., Assistant Medical Officer to the Education Committee.

FREDERICK A. SHARPE, D.P.H. M.B. (Lond.), &c., Resident Medical Officer Infectious Diseases Hospital.

Chief Sanitary Inspector.

W. WILKINSON, Certif. Sany. Inst., R.P.C.

Assistant Sanitary Inspectors.

THOMAS TURNER, W. DOLMAN, Certif. Sany. Institute.
FREDK. W. FORD, Certif. Sany. Institute.
HARRY J. MORGAN, Certif. Sany. Institute.
FREDERICK HANSON, Certif. Sany. Institute.
MISS DAVIES, Cert. San. Insp. Board and Sany. Institute.
MISS RADFORD, Certif. Sany. Institute.

School Nurse.

Nurse A. E. BRIDGER.

Health Visitor.

Nurse CASH.
By arrangement with the Derby Sanitary and Nursing Institute.

Chief Clerks.

H. COPE.
HENRY E. DAYKIN.

Clerks.

MISS M. BROWN, Certif. C.M.B., Cert. San. Inst., Cert. San. Insp. Board.
A. EASON.
G. J. GLEESON.
A. LITCHFIELD.
W. B. NEEDHAM.
H. ROBINSON.

STATISTICAL SUMMARY, 1908.

Population estimated to the middle of 1908	Males ...	62,208	Total ...	127,583
	Females ...	65,375		
Marriages				982
Annual rate of Persons Married per 1,000 of the population				15·4
Births	Males ..	1,713	Total ...	3,321
	Females ...	1,608		
Annual rate of Births per 1,000 of the population ...				26.1
Deaths	Males ...	891	Total ...	1,678
	Females ...	787		
Annual rate of Mortality per 1,000	Males ...	14·3	Total ...	13·2
	Females ...	12·1		
Excess of Registered Births over Deaths				1,643

Area.—The area of the old Borough is 3,445 acres. The acreage of the portions of Normanton, Osmaston, and Alvaston, and Boulton, added to the Borough, Nov., 1901, is 1,815.

Elevation.—The inhabitants of Derby reside at a mean elevation of 182 feet above sea level, the highest point being at the Borough Boundary in Burton Road, 325 feet, and the lowest at "The Siddals," 142 feet. The elevation at the Market Place is 157 feet.

Houses.—At the Census of 1901 there were 26,625 houses, of these, 24,851 were inhabited, and of the remaining 1,774, there were, on Census night, 995 "in occupation," that is, utilised for business or other purposes but without occupants, whilst 779 were not "in occupation." In addition there were 228 houses in course of erection.

Density.—The mean density of the Borough was equal to 24 persons per acre. The density of the various wards was as follows: —Abbey 34, Arboretum 80, Babington 69, Becket 79, Bridge 25, Castle 76, Dale 20, Derwent 6, Friar Gate 53, King's Mead 86, Litchurch 21, Markeaton 53, Normanton 75, Osmaston 5, Peartree 20, and Rowditch 25 persons per acre.

Annual Rateable Value.—The rateable value of the Borough for 1908 was £534,556 for District Rate purposes, and £565,357 for Poor Rate purposes.

TABLE I.—Population, Number of Births, Total Deaths, and Deaths from certain causes, with the rates per 1,000 of the Population in the Borough of Derby for the past thirty-one years.

YEAR	Population.	Corrected Number of Deaths.	Death-rate per 1,000 living.	Births.	Birth-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic rate per 1,000 living at all ages.	Deaths from Phthisis.	Phthisis Death-rate.	Infantile Mortality per 1.000 Births.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory Death-rate.
1878	80,385	1,613	20·1	3,092	38·4	257	3·1	162	2·0	148	296	3·6
1879	80,385	1,970	24·5	3,139	39·4	380	4·7	147	1·8	132	407	5·0
1880	80,385	1,614	20·1	3,050	37·9	233	2·8	140	1·7	145	224	2·7
1881	81,470	1,529	18·9	3,156	38·8	166	2·03	131	1·6	129	287	3·5
1882	82,687	1,533	18·5	2,959	35·7	187	2·2	140	1·6	139	259	3·1
1883	83,922	1,549	18·6	3,074	36·6	144	1·7	146	1·7	146	263	3·1
1884	85,176	1,569	18·4	3,013	35·3	181	2·1	131	1·5	143	259	3·0
1885	86,449	1,591	18·4	3,055	35·3	132	1·5	128	1·3	138	310	3·5
1886	87,741	1,651	18·8	3,069	35·9	166	1·8	154	1·7	148	272	3·1
1887	89,052	1,683	18·9	2,858	32·9	223	2·5	146	1·6	138	247	2·7
1888	90,383	1,550	17·1	2,824	31·2	163	1·8	116	1·2	145	271	2·9
1889	91,733	1,582	17·2	2,906	31·6	133	1·4	99	1·7	147	281	3·0
1890	93,105	1,843	19·8	2,699	28·9	260	2·7	143	1·5	160	326	3·5
1891	94,422	1,765	18·7	2,885	30·6	126	1·4	139	1·5	139	158	1·7
1892	95,528	1,734	18·2	3.038	31·8	174	1·9	140	1·5	171	295	3·1
1893	96,648	1,740	18·1	3,123	32·4	190	2·0	132	1·4	155	281	2·9
1894	97,781	1,468	15·1	2,890	29·6	151	1·6	103	1·1	121	249	2·6
1895	98,927	1,669	16·9	2,909	29·4	178	1·8	105	1·1	158	254	2·6
1896	100,087	1,577	15·8	2,834	28·4	182	1·9	137	1·4	150	240	2·4
1897	101,262	1,656	16·4	2,803	27·7	173	1·8	99	0·98	168	249	2·5
1898	102,448	1,756	17·2	2,860	28·0	235	2·3	133	1·3	169	257	2·6
1899	103,649	1,775	17·2	2,984	28·8	173	1·7	116	1·2	163	244	2·4
1900	104,684	1,854	17·7	2,900	27·7	247	2·4	113	1·1	173	271	2·6
1901	106,076	1,598	15·1	2,939	27·8	189	1·8	99	0·94	155	220	2·8
1902	116,869	1,639	14·1	3,326	28·5	145	1·3	102	0·87	126	264	2·3
1903	118,707	1,596	13·5	3,215	27·1	108	0·9	102	0·86	128	210	1·8
1904	120,449	1,824	15·2	3,282	27·3	167	1·4	121	1·01	143	264	2·2
1905	122,207	1,746	14·3	3,108	25·5	183	1·5	96	0·79	151	254	2·1
1906	123,981	1,733	14·0	3,103	25·1	188	1·6	113	0·92	116	244	2·0
1907	125,774	1,784	14·2	3,152	25·1	219	1·8	121	1·0	120	269	2·2
1908	127,583	1,678	13·2	3,321	26·1	134	1·1	115	0·91	109	223	1·8

Vital Statistics for the Year 1908.

Estimated Population.—The estimated population of the Borough at the middle of 1908 was 127,583. This total includes the inhabitants living in the parts of the Borough added in the year 1901, and also makes allowance for the probable increase in these districts. The increase in population during the twelve months is thus estimated to be 1,809, which is 166 higher than the excess of births over deaths.

Marriages.—The number of marriages which were solemnized during 1908 was 982; this represents a rate of persons married equal to 15.4 per 1,000 of the population, which is lower than any recorded since 1893, the first year of which we have a record. The following table gives information relating to the marriage rate for the past 11 years:—

Year.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Number of Marriages.	961	961	1025	943	948	957	973	972	981	1005	982
Rate.	18·8	18·6	19·6	17·8	16·3	16·1	16·17	16·0	15·9	15·9	15·4

Birth Rate.—The births registered during the year numbered 3,321, of which there were:—

	Males.	Females.	Total.	Grand Total.
Legitimate ...	1,662	1,566	3,228	3,321
Illegitimate ...	51	42	93	

From these figures it will be seen that the illegitimate births represent 2.8 per cent. of the present total, as compared with 3.9 per cent. in the previous year, and 4.8 in 1906. In the following table is set out the distribution of all births, both legitimate and illegitimate:—

Table II.—Relating to Births, Legitimate and Illegitimate.

WARD.	BIRTHS.			Birth Rate per 1,000.	Illegitimate Births per 1,000 Births in 1908.	Total Legitimate and Illegitimate Births registered during the years 1902 to 1908.		
	Legitimate	Illegitimate	Total.			Legitimate.	Illegitimate	Illegitimate per 1,000 Births.
Abbey ...	304	14	318	32·5	44	2034	83	39
Arboretum ...	189	3	192	19·6	15	1353	37	27
Babington ...	155	3	158	17·0	19	1035	37	35
Becket ..	128	12	140	17·5	85	1052	62	56
Bridge ...	133	2	135	24·0	15	787	31	41
Castle ...	249	10	259	30·0	38	1636	81	46
Dale ...	215	4	219	40·1	18	1342	37	27
Derwent ...	152	3	155	28·3	19	1054	33	30
Friargate ...	221	8	229	21·2	35	1507	49	32
Kingsmead ...	181	6	187	21·0	32	1229	93	71
Litchurch ...	180	8	188	20·1	43	1125	58	49
Markeaton ...	225	3	228	28·5	13	1533	67	42
Normanton ...	245	5	250	31·0	20	1670	35	21
Osmaston ...	192	5	197	32·4	25	1377	47	33
Pear Tree ...	280	6	286	36·8	21	1691	39	23
Rowditch ...	169	1	170	20·0	6	1210	64	51
Others ...	10		10			16		
Totals ...	3228	93	3321	26·1	28	21,651	856	38

The births registered during the year numbered 3,321, in which total are included 1,713 boys and 1,608 girls. This represents a birth rate of 26.1 per 1,000, and an increase of 1 per 1,000 over the rate (25.1) for last year and for 1906. For 1905, the rate was 25.6, and in 1904 it was 27.3. It is interesting to compare the yearly increases in population as represented by the difference between registered births and deaths in the early half of the "eighties," and those recorded since the extension of the Borough in the present decade. The population in the first period was only practically two-thirds what it is to-day, the death-rate was never less than eighteen, and the birth-rate was only once below thirty-five.

Year.	Birth Rate.	Death Rate.	Natural Increase of Population.	Year.	Birth Rate.	Death Rate.	Natural Increase of Population.
1882	35.7	18.5	1426	1902	28.5	14.1	1687
1883	36.6	18.6	1555	1903	27.1	13.5	1619
1884	35.3	18.4	1444	1904	27.3	15.2	1458
1885	35.3	18.4	1464	1905	25.5	14.3	1362
1886	35.9	18.8	1418	1906	25.1	14.0	1370
1887	32.9	18.9	1175	1907	25.1	14.2	1368
				1908	26.1	13.2	1643

In the earlier period the first five years show a fairly constant natural increase, but in 1887, a marked decline in the birth-rate without any corresponding fall in the death rate resulted in a distinct diminution in the number of individuals added to the populaton by the excess of births over deaths. In the later period the figures show a progressive decline notwithstanding the increasing population. In the first two years of the later period and in 1908 the decline of the birth-rate was not sufficiently pronounced to affect the natural increase owing to the marked decline in the death-rate, in fact it was higher than in any of the years of the first period. The decrease in the birth-rate has been practically ten per 1,000, and the death-rate four per 1,000. The increase of population is of course also assisted by the excess of immigrants over emigrants.

As regards the various wards, the birth rates, as in previous years, varied between very wide limits, being as low as 17.0 in Babington Ward, and 17.5 in Becket Ward, and as high as 40.1 in Dale Ward. Almost each year these wards have respectively the lowest and highest birth rates. Rates of over 30 were also recorded in Abbey, Castle, Normanton, Osmaston and Pear Tree Wards. Litchurch and Rowditch are wards which almost always have low birth rates, and in 1908 they had respectively rates of 20.1 and 20.0. The fact that these various wards occupy fairly constant positions in this table seems to indicate that there is some factor at play other than error creeping in as a result of fewness in numbers.

The number of births which have been divided for the purpose of ascertaining facts relating to illegitimacy now exceeds 20,000, and it will be observed that practically one child in every 26 born in Derby is illegitimate. Yearly totals show wide variations, and as an instance the illegitimate rate per 1,000 children born was 85 in Becket Ward last year, though the average rate for that ward extending over a period is about 56. The rate of illegitimacy is highest in King's Mead Ward, not less than one child in fourteen being born with that social stigma attached to it. The ward which shows the next highest figure is Becket Ward, rather less than one child in 18 being illegitimate. Rowditch Ward shows the next highest rate of one in 19. The credit for the lowest illegitimate rate belongs to Normanton Ward, whilst a low rate is also recorded in Pear Tree; two other wards, Dale Ward and Arboretum Ward have also rates below 30. It is interesting to note that two of the wards which have already been mentioned as having high birth rates, have also low illegitimate rates.

Notification of Births Act, 1907.—This Act was adopted by the Council at a meeting held on December 4th, 1907, and came into operation early in January, 1908. The number of births notified was 3,142. Details of work done under this Act will be found on page 63.

I append herewith the usual table relating to the burial of still-born children in the Derby Cemeteries. Such burials equal 9.5 per cent. of the total, the highest percentage since the year 1903.

For the particulars contained in the following table I am indebted to Mr. C. E. Oliver, Clerk to the Derby Burial Board:—

TABLE III.—Infantile Mortality during the Year 1908.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–2 Months.	2–3 Months.	3–4 Months.	4–5 Months.	5–6 Months.	6–7 Months.	7–8 Months.	8–9 Months.	9–10 Months.	10–11 Months.	11–12 Months.	Total Deaths under One Year.	NON-RESIDENTS.
	Certified	65	17	24	15	121	51	35	28	27	18	26	12	11	10	12	8	359	8
	Uncertified	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
i. Common Infectious Diseases.	Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria: Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	..	..	..	..	..	2	1	..	..	1	1	..	1	1	..	..	7	..
ii. Diarrhœal *Diseases.*	Diarrhœa, all forms	..	1	..	1	2	5	3	5	7	3	6	3	..	1	..	1	36	..
	Enteritis, Muco-enteritis, Gastro-enteritis	..	..	..	..	..	1	2	2	3	..	3	..	..	1	2	..	14	..
	Gastritis, Gastro-intestinal Catarrh	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	3	..
iii. Wasting Diseases.	Premature Birth	34	5	12	7	58	9	3	2	1	..	..	..	..	..	..	..	73	1
	Congenital Defects	9	3	3	1	16	5	2	2	..	1	..	..	..	..	1	..	27	1
	Injury at Birth	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..
	Want of Breast-milk, Starvation	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	..
	Atrophy, Debility, Marasmus	6	1	3	3	13	10	6	3	4	3	2	1	1	..	1	..	44	1
iv. Tuberculous Diseases.	Tuberculous Meningitis	..	..	..	..	..	..	..	..	1	3	..	..	2	..	1	..	7	..
	Tuberculous Peritonitis: Tabes Mesenterica	..	..	..	..	..	1	1	1	2	..	..	..	..	1	..	1	7	..
	Other Tuberculous Diseases	..	..	..	..	..	..	1	..	..	..	2	..	..	3	1	..	7	..
v. Other Causes.	Erysipelas	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..
	Syphilis	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	2	..
	Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Meningitis (*not Tuberculous*)	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	3	..
	Convulsions	7	4	3	1	15	5	3	4	1	1	5	2	3	2	2	1	44	..
	Bronchitis	..	1	.	1	2	4	6	4	3	2	3	3	..	..	1	1	29	..
	Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	..	1	..	..	1	1	2	..	3	3	2	1	2	..	1	3	19	..
	Suffocation, overlying	2	..	..	..	2	1	..	1	..	..	..	..	..	..	..	..	4	..
	Other Causes	5	1	1	1	8	4	4	4	1	1	..	1	1	..	1	1	26	5
		65	17	24	15	121	51	35	28	27	18	26	12	11	10	12	8	359	8

Burials in the Derby Cemeteries during the past 14 years.

Year.	Ordinary Burials.	Burials of Still-born Children.	Total.	Percentage of Burials of Still-born Children to the whole.
1895	1587	210	1797	11·7
1896	1510	218	1728	12·7
1897	1581	182	1763	10·4
1898	1744	178	1922	9 3
1899	1787	193	1980	9·8
1900	1887	195	2082	9·4
1901	1627	246	1873	13·2
1902	1552	217	1769	12·3
1903	1522	184	1706	10·8
1904	1704	154	1858	8·3
1905	1692	161	1853	8·5
1906	1666	171	1837	9·1
1907	1627	155	1782	8·7
1908	1558	163	1721	9·5

Annual Rate of Mortality.—The total number of deaths registered during the year was 1,773, as against 1,870 in 1907, and 1,832 in 1906; of these deaths 99 were of strangers; and there were four deaths of Derby residents registered outside the Borough, making a net total of 1,678. The net death rate, therefore, from all causes was 13.2 per 1,000, as against 14.2 in 1907, and 14.0 in 1906. This is the lowest death rate recorded in the Borough. In the last seven years the rate has been below 15 on six occasions, whilst in the other year it was very little over 15. Derby is a working class community, and if a death rate of under 15 per 1,000 can be maintained, it will be a source of considerable satisfaction.

Mortality in Age Groups.—The diseases from which individuals die at different age periods, show marked variation, and a consideration of these varying contributory factors is of interest.

a. INFANCY. In Table III. are set out the causes of death among children under the age of one year. These are further subdivided into the weeks of the first month of life, and figures are given for each month until the age of one year. The deaths of 359 infants were registered during the year, as compared with 377 in the previous year. In the sub-division "Wasting Diseases," no fewer than 148 of these deaths are classified; premature birth and debilitated conditions contributing respectively 73 and 44. The next highest totals are convulsions 44, and bronchitis and pneumonia 48; diarrhœa, which is usually such an important factor in this table accounts for 36 deaths, whilst the allied diseases, enteritis and gastritis caused 17 deaths as compared with 14 in the previous year.

The investigation of the relationship between feeding and the mortality of infants which was begun in 1899, has been continued, and the results are recorded below:—

The total number of children which have been under observation is now 18,377. There have been registered 21,905 children between November, 1900, and December, 1907, the last member of this group attained the age of twelve months in December, 1908. From the total the following deductions must be made—on account of no visit being made, but in respect of whom no death has been registered 2,641; and on account of no visit being made owing to death occurring before any information could be obtained, 136. There are also excluded the deaths of 751 children, for the reason that the death could not have been influenced by the manner of feeding, thus 92 of them suffered from some congenital defect incompatible with life; in 190 cases death took place owing to debility and no food had been given; in 490 instances the child was prematurely born, and in eight other cases the death was due to some cause not associated with the manner of feeding. These deductions leave a net total of 18,377 children who had been under the direct observation of the women inspectors. Of this number 68 per cent.

Table IV.—*Mortality per 1,000 from Certain Diseases among Children who were Breast-fed or Hand-fed, or who were at first Breast-fed and subsequently Hand-fed (Mixed).*

	Breast-fed.		Mixed.		Hand-fed.		All three classes.	
Number of children.	12415		2680		3282		18377	
Disease.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.
Bronchitis and Pneumonia	171	13.8	38	14.2	103	31.4	312	17.0
Diarrhœa and Epidemic Enteritis	96	7.8	55	20.6	190	57.9	341	18.6
Gastritis and Gastro-Enteritis	13	1.1	7	2.7	25	7.7	45	2.5
Marasmus	57	4.6	30	11.2	81	24.7	168	9.2
Atrophy and Debility	99	8.0	20	7.1	91	27.8	210	11.5
Tabes Mesenterica ..	11	0.9	3	1.2	16	4.9	30	1.7
Various Abdominal Tuberculoses ..	14	1.2	7	2.6	16	4.9	37	2.1
All other Tuberculous Diseases	34	2.8	12	4.5	14	4.3	60	3.3
Convulsions	161	13.0	44	16.5	99	30.2	304	16.6
Dentition	14	1.2	10	3.8	12	3.7	36	2.0
Zymotic Diseases other than Diarrhœa ..	59	4.8	26	9.7	38	11.6	123	6.7
All other Diseases ..	121	9.8	15	5.6	72	22.0	208	11.4
Totals	850	69.5	267	95.9	757	230.7	1874	102.0

were breast-fed, 18 per cent. were wholly hand-fed, and the remaining 14 per cent. were partly reared by hand and partly by natural means. The method of feeding has a very important bearing on the probability of a child surviving to the age of one year, as will be seen from the above table.

The death rate amongst the breast-fed children is 69.5 per 1,000, as compared with 230.7 per 1,000 among those hand-fed, and 95.9 per 1,000 among those only partly breast fed. It is important also to note that not only is this marked difference to be seen in the general death rate but in every classification there is the same result, the death rate is invariably higher.

b. OTHER AGES. At all other ages there were registered 1,319 deaths, and of these 157 were of children between the ages of 1 and 5, 67 at the age period 5 and under 15, 45 beween 15 and 25 years of age, 598 between 25 and 65, and 452 at all ages over 65. In the first of these age periods, zymotic diseases were responsible for a much smaller number of deaths than in 1907, measles in particular only causing 18 deaths as compared with 83 in the previous year. Bronchitis and Pneumonia 13 and 14, and Diphtheria 15, were likewise very fatal diseases. Tuberculous diseases other than phthisis were the cause of 27 deaths, phthisis accounting for only 2 deaths. The age periods, 5 to 15, and 15 to 25, are noted for being the healthiest, and on the former the chief contributing diseases were diphtheria 20, and tuberculous disease affecting other organs than the lungs 8; on the latter, phthisis was the most dangerous ailment as no fewer than 17 out of the 45 deaths were assignable to that cause. This is likewise a dangerous disease at the next age period, and in addition heart diseases 90, cancer 68, show a considerable incidence. In the declining years of life, chest ailments 62, heart diseases 90, and cancer 68, are the chief causes of death, whilst the zymotic ailments become practically a negligible quantity.

District Mortality Rates.—In Table V., the various mortality rates which have been recorded in the different wards into which the town is divided are set out. The deaths in public institutions have been relegated to the wards to which the persons belonged before they were removed. On the basis of the general death-rate, the healthiest wards were Babington 10.3, Friar Gate 10.5, Normanton 10.7, and Bridge 10.7. Castle Ward shews the highest death-rate, viz., 18.2, with King's Mead 17.5, and Dale Ward 17.1, the next in order. The high death-rate in each of these wards is in considerable measure contributed to by the

TABLE V.—Population, Density, Deaths, and certain Death Rates in the various Wards of the Borough of Derby for the Year 1908.

WARDS.	Population in 1901.	Estimated population in 1908.	Acreage.	Density in persons per acre.	Total Deaths.	Death-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic death rate.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory death rate.	Deaths from Phthisis	Phthisis death rate.	Number of deaths of infants under 1 year.	Deaths of infants under 1 year of age per 1,000 births.
Abbey ...	8,747	9,802	285	35	117	12·0	10	1·1	20	2·1	2	0·3	34	107
Arboretum ...	8,889	9 810	122	80	124	12·7	9	1·0	18	1·9	9	1·0	27	141
Babington .	8,447	9,320	134	70	96	10·3	6	0·7	14	1·6	3	0·4	15	95
Becket ...	7,297	8,024	102	79	110	13·8	9	1·2	21	2·7	8	1·0	24	172
Bridge ...	5,081	5,647	229	25	60	10·7	5	0·9	3	0·6	7	1·3	6	45
Castle ...	7,786	8,640	112	78	157	18·2	9	1·1	21	2·5	10	1.2	43	167
Dale ...	4.785	5,381	269	20	92	17·1	11	2·1	12	2·3	2	0·4	25	115
Derwent ...	4,933	5,493	907	6	73	13·3	8	1·5	11	2·0	5	1·0	14	91
Friargate ...	8,516	9,470	176	54	99	10·5	8	0·9	7	0·8	12	1·3	20	88
King's Mead ...	7,064	7,793	90	87	136	17·5	7	0.9	22	2·9	18	2·4	30	161
Litchurch ...	8,474	9,360	462	21	116	12·4	9	1·0	16	1·8	7	0·8	17	91
Markeaton ...	7,200	8,001	151	53	123	15·4	8	1·0	15	1·9	6	0·8	26	115
Normanton ...	7,225	8,082	106	77	97	12·0	11	1·4	13	1·7	5	0·7	17	68
Osmaston ...	5,429	6,091	1,381	5	65	10·7	6	1·0	5	0·9	5	0·9	13	66
Pear Tree	6,930	7,789	392	20	106	13·7	14	1·8	10	1·3	7	0·9	30	105
Rowditch ...	8,045	8,880	354	25	107	12·1	4	0·5	15	1·7	9	1·0	18	106
*Institutions ..	...	...	...	...	426	...	26	...	31	...	22	...	...	...
Non-Residents	...	...	...	...	99	...	2	...	4	...	4	...	8	...
†Totals ...	114,848	127,583	5,272	25	1,678	13·2	134	1·1	223	1·8	115	1·0	359	109

*The deaths in Institutions have been relegated to the various Wards.

†Excluding Non-Residents.

high death-rate among children. The infantile mortality in the town as a whole was 109 per 1,000 births, but in Castle Ward it was 167, and in King's Mead Ward 161. The highest infantile mortality rate was in Becket Ward (172), the general death-rate in this Ward being 13.8. Infantile mortality rates of below 80 are noted in Bridge 45, Osmaston 66, and Normanton 68. These rates emphasise most strongly the waste of infant life which is taking place in the wards just referred to. In King's Mead Ward the phthisis death-rate is more than double that recorded in the town as a whole, and is eight times the rate in Abbey Ward. The phthisis rate is also high in Bridge (1.3), Friar Gate (1.3), and Castle (1.2) Wards. It is satisfactory to note the fact that the zymotic rate (1.1) is the lowest recorded with one exception (the year 1903, when this rate was 0.9). The highest zymotic rate is recorded in Dale Ward (2.1), and this is chiefly due to the heavy incidence of measles and diarrhœa in that ward. Diphtheria and diarrhœa are chiefly responsible for the high zymotic rate recorded in Pear Tree Ward.

Inquests.—I am informed by the Borough Coroner that the number of Inquests held by him during the year ended December 31st, 1908, was 173, being made up by 109 held on males, and 64 on females. There were no unregistered deaths in the Borough; the cause of every death was certified by a medical practitioner or by the Coroner.

Mortuary.—The Coroner's Officer, Mr. John Payne, informs me that the number of dead bodies which were received into the Mortuary during 1908 was 14, and that one post-mortem examination was conducted in the building during the year.

The Notification of Infectious Diseases.—The total number of cases of infectious diseases notified in accordance with the requirements of the Infectious Diseases Notification Act of 1890, was 960, as compared with 1,095 in the previous year.

The highest and lowest weekly incidences were as follows:—

Week ending, 1908.		Cases Notified.
26th December ...	highest number ...	41
2nd May ...	lowest number ...	6

The following summary gives particulars of these various diseases:

Cases of Infectious Disease notified during 1908.

Quarters.	Totals.	Small Pox.	Scarlet Fever.	Diphtheria.	Continued Fever.	Enteric Fever.	Erysipelas.	Puerperal Fever.	Membranous Croup. (See Diphtheria.)
First ...	242	...	31	163	...	9	36	3	...
Second	237	...	26	160	...	10	33	8	...
Third ...	185	...	32	124	...	9	17	3	...
Fourth...	296	...	27	223	...	11	34	1	...
Year ...	960	...	116	670	...	39	120	15	...

Table VI. gives information respecting the notification of infectious diseases in previous years. It will be observed that the number notified last year was rather lower than that for the previous year (996). It may be noted that diphtheria accounts for nearly 70 per cent. of the total cases notified during 1908.

In dealing with these cases the following action was taken :—

	Quarters.				
	First.	Second.	Third.	Fourth.	Totals.
Number of visits made by Inspectors	928	728	504	933	3093
Cases isolated. Borough Hospital :—					
Scarlet Fever	15	10	25	20	70
Diphtheria	35	48	47	88	218
Cases isolated. Royal Infirmary :—					
Diphtheria	1	2	3	...	6
Enteric Fever	7	5	6	10	28
Erysipelas	...	...	...	...	...
Puerperal Fever	1	2	1	1	5
Cases isolated. Children's Hospital					
Enteric Fever...	1	2	1	...	4
Cases willing to be isolated but for which no room could be found ...	18	9	11	6	44
Cases in which isolation was delayed	3	1	4	6	14
Number of rooms fumigated	271	228	186	274	959

Table **VI.**—Number of cases of Infectious Disease notified in the Borough of Derby during 1908, and in each year since 1881.

Diseases.	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Small Pox ...	46	15	2	7	...	...	...	20	...	5	...	11	52	3	94	1	1	...	...	1	1	8	48	210	123	...	...	...
Scarlet Fever .	423	770	506	389	232	167	64	756	775	346	318	470	501	513	364	427	432	181	885	602	616	332	185	638	535	290	181	116
Diphtheria ...	6	10	8	...	1	6	27	23	46	81	66	67	50	46	43	45	57	74	60	52	74	63	83	150	271	561	606	670
Membranous Croup ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...
Enteric & Con. Fever ...	95	113	51	344	57	162	105	163	99	64	66	55	111	104	99	104	125	159	141	125	114	85	64	64	44	71	74	39
Typhus Fever	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	6	6	7	11	2	1	1	3	5	1	8	9	11	7	10	3	3	6	8	7	10	13	14	16	13	11	7	15
Erysipelas ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	67	52	88	135	138	89	113	128	120
Phthisis* ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56	105	103	82	111	99	108
Totals ...	577	914	574	751	292	336	197	965	925	497	458	612	727	673	610	580	618	720	1094	854	867	645	634	1319	1158	1160	1095	1068

In addition to the above, the following cases of Measles were also notified during short periods of voluntary notification:—1884, 513 cases; 1887, 874 cases; 1888, 33 cases; also 34 cases of Scarlet Fever, and 3 cases of Enteric Fever from the annexed areas during 1901.

* Phthisis became a notifiable (voluntarily) disease in July, 1902

Hospital for Infectious Diseases.—The staff as at present constituted consists of a resident Medical Officer, Matron, 2 Sisters in charge, 2 Assistant Nurses, and 8 Probationers, in addition there are Cook, Kitchenmaid, 2 Housemaids, Between Maid, Laundress and Laundrymaid, 3 Wardmaids, and Caretaker and his wife. Additional help is given by two men who attend daily for work in the boiler-house and grounds. Special thanks are due to the Matron (Miss Mould) for her loyal assistance, tact, and co-operation, which have well served to maintain the efficiency of the institution, especially during a year marked by changes in the non-resident and resident medical staff.

The admission of diphtheria cases instituted in 1907 was continued throughout the year, and no fewer than 218 cases were admitted as compared with 70 cases of Scarlet Fever.

The Bacteriological Laboratory has been utilized fairly extensively throughout the year, the number of examinations being as follows:—Throat Swabs 538, and Sputum Examinations 14; details of these examinations are given on pages 25 to 29.

As a preliminary to the discharge of Diphtheria patients from Hospital, a swabbing of the throat was taken in each case, showing the absence of the Klebs-Loeffler Bacillus, and in the latter part of the year two successive negative swabs taken from both throat and nose were required before discharge of the patient was sanctioned.

No case of Smallpox has been admitted during the past year. Fortunately the town has been free from the disease. The need for some special provision for the isolation of Smallpox cannot be too strongly emphasized, as to attempt to deal with Smallpox cases in the Infectious Hospital would be extremely dangerous both to patients and the public, if not absolutely impossible. The memorandum of the Local Government Board "On the Provision of Isolation Hospital Accommodation by Local Authorities" is very decided upon the question of Hospitals for Smallpox, Condition 3 states "a hospital must not be used at one and the same time for the reception of cases of smallpox and of any other class of disease." There are, therefore, only two alternatives in the event of an outbreak of Small-pox in Derby, (1) to discharge all the patients suffering from Scarlet Fever and Diphtheria from the Hospital to make room for Small-pox cases; or (2) to treat Small-pox cases in their own homes. As (1) will be found to be most certainly impracticable as well as inhumane, the second alternative will be necessary, *e.g.*, the home treatment of Smallpox cases.

The following statistics have reference to the patients under treatment during the past year:—

	Scarlet Fever.	Diphtheria.
Remaining in Hospital, December 31st, 1907 ...	5	8
Admitted during 1908	70	216
Number discharged during 1908	65	177
Number who have died in Hospital during 1908 ...	2	17
Remaining under treatment on December 31st, 1908	8	30

Scarlet Fever.

An analysis of the cases of Scarlet Fever shows that—

At ages of	0-5	there were	11	cases admitted.
,,	5-10	,,	28	,,
,,	10-15	,,	21	,,
,,	15 & over	,,	10	,,

Complications—

3	cases suffered from	discharge from the ears,
6	suffered from	Nephritis,
10	,,	enlarged glands,
3	,,	rheumatism,
1	,,	eczema,
1	,,	jaundice.

Average duration of stay in Hospital—45.9 days.

Diphtheria.

NUMBER OF CASES ... 216.

Antitoxin administered before admission—87.

Average duration of stay—29.3 days.

Age.		Deaths.	Tracheotomy.
0-5 ...	40	7	5 (3 deaths).
5-10 ...	107	9	
10-15 ...	51	1	
15 & over	18	0	
	216	17	

Contact Cases.—4.
(for isolation from Derbyshire Royal Infirmary).

Causes of Death.—

	0-5	5-10	10-15
Toxaemia ...	3	3	1
Heart Failure	3	2	
*Asphyxia ...	1	2	

* Tracheotomy too late to do any good.

Paralysis.—

	Age periods.		
	0-5	5-10	10-15
Soft Palate ...	2	7	1
Eye	—	3	—
Heart ...	5	5	—
	(3 fatal)	(2 fatal)	
Diaphragm	—	1	—

Paralysis.—(Time of onset after Admission)—

	1st wk.	2nd wk.	3rd wk.	4th wk.	5th wk.	6th wk.
Palate ...	3	2	3	1	1	—
Eye ...	—	—	1	—	—	—
Heart ...	5	1	—	4	—	—
	(4 deaths)	(fatal)				
Diaphragm	—	—	—	—	—	1
Pharynx	—	—	—	—	—	1

Laryngeal Obstruction.—

	0-5 yrs.	5-10 yrs.
	3 (2 fatal)	5 (1 fatal)
Tracheotomy	2	3

Other Complications.—The remaining complications of the Diphtheria cases were Chicken-pox (2), Rheumatism and Ringworm (1); one case (fatal) had Scarlet Fever as a complication, while another had measles.

THE BACTERIOLOGICAL LABORATORY.

The following are the details of the work of the Hospital Bacteriological Laboratory for the year 1908:—

Throat Swabs.—There were 538 swabs taken from the throats of suspected diphtheria cases examined during the year, including 86 swabs taken from the throats of diphtheria patients previous to their discharge from hospital as convalescent. Detailed records of the results of these examinations were kept since April of the year. Previous to this 41 swabs had been examined (15 in January, 18 in February, 14 in March). The following particulars refer to the 491 examinations made since April:—

April.	Hospital Swabs	10	Diphtheria Contacts	3	For Diagnosis	1
	Positive	4	Positive	1	Positive	1
	Negative	6	Negative	2		

Total Examined	14
Positive	6
Negative	8

May.	Hospital	4	Contacts	4
	Positive	0	Positive	1
	Negative	4	Negative	3

Total Examined	8
Positive	1
Negative	7

June.	Diphtheria Contacts	15
	Positive	4
	Negative	11

July.	Hospital Cases	2	Contacts	16	Total	18
	Positive	0	Positive	4	Positive	4
	Negative	2	Negative	12	Negative	14

August.	Hospital	1	Contact Swabs	21
	Positive	0	Positive	3
	Negative	1	Negative	18
	Total Examined	22		
	Positive	3		
	Negative	19		

September.	Contact Swabs	19
	Positive	8
	Negative	11

October.	Hospital	5	Contact Swabs	17
	Positive	2	Positive	5
	Negative	3	Negative	12
	For Diagnosis	1	School Swabs	26
	Positive	0	Positive	10
	Negative	1	Negative	16
	Total Examined	49		
	Positive	17		
	Negative	32		

November.	Hospital Cases	18	Contact Swabs	42
	Positive	4	Positive	10
	Negative	14	Negative	32
	For Diagnosis	1	School Cases	82
	Positive	0	Positive	16
	Negative	1	Negative	66
	Total for November	143		
	Positive	30		
	Negative	113		

December.	Hospital Cases	46	Diphtheria Contacts	32
	Positive	11	Positive	5
	Negative	35	Negative	27
	For Diagnosis	28	School Swabs	97
	Positive	7	Positive	0
	Negative	21	Negative	97

Total Examined in December	203
Positive	23
Negative	180

Total number of Swabs Examined April to December, 1908	491
Total Positive	96
Total Negative	395

From these figures it will be seen that 96 cases of diphtheria were recognised and segregated (or isolation continued in the Hospital cases) which, but for bacteriological examination, would not have been isolated.

School Swabs.—No fewer than 205 swabs of school children's throats were examined in October, November, and December, of which 26 gave positive results, and 179 negative.

Table VII. **Analysis of School Swabs:—**

		Total.	*Positive*	*Negative*	
ST. PAUL'S	Oct.	26	10	16	38
	Nov.	2	1	1	
	Dec.	10	0	10	
TRINITY	Nov.	4	1	3	9
	Dec.	5	0	5	
GERARD STREET ..	Nov.	12	2	10	29
	Dec.	17	0	17	
ST. DUNSTAN'S ..	Nov.	20	6	14	25
	Dec.	5	0	5	
BRIGHTON ROAD ..	Nov.	14	0	14	30
	Dec.	16	0	16	
ST. ANDREW'S ..	Nov.	18	4	14	18
	Dec.	0	0	0	
FIRS ESTATE ..	Nov.	5	2	3	11
	Dec.	6	0	6	
ST. CHAD'S	Nov.	6	0	6	6
	Dec.	0	0	0	
NUN STREET ..	Nov.	1	0	1	1
	Dec.	0	0	0	
ST. LUKE'S	Dec.	13	0	13	13
OSMASTON	Dec.	1	0	1	1
NOTTINGHAM RD.	Dec.	9	0	9	9
TRAFFIC STREET ..	Dec.	8	0	8	8
CHRIST CHURCH ..	Dec.	2	0	2	2
PEAR TREE	Dec.	5	0	5	5
		205	26	179	205

Sputum Examinations.—The number of sputum specimens examined for the presence of tubercle bacilli was 14, and the bacilli were found in two of these; examination of the remaining twelve failed to reveal the presence of these organisms.

A special tribute is I think due to Dr. F. A. Sharpe, Resident Medical Officer at the Hospital, for the care and trouble which he took in the preparation of media and outfits, and the examination of the cultures during the last few months of the year.

Hospital Provisioning, 1908.

1908.	Days of treatment.	Average Patients per day.	Cost of Provisioning.			Average Cost per Patient per day.*	
			£	s.	d.	s.	d.
1st Quarter	1570	17·3	136	2	1	1	8·8
2nd ,,	1682	18·5	148	9	3	1	9·2
3rd ,,	2382	25·9	166	9	2¾	1	4·8
4th ,,	3470	37·7	218	10	2¾	1	3·1
Totals 1908	9104	24·9	669	10	9½	1	5·6
Totals for previous year	7,518	20·6	521	13	0½	1	5

*This includes cost of provisioning staff.

Mortality from Zymotic Diseases:—

Zymotic Mortality during the past six years.

Years.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1,000	1·66	0·9	1·4	1·5	1·6	1·8	1·1

The total deaths registered as occurring within the Borough from this class of disease was 134, as compared with 220 in 1907. These 134 deaths are equivalent to a death rate of 1.1 per 1,000. This is the smallest recorded, with the exception of one year (1903), when the lowest zymotic death-rate recorded in the Borough was noted (0.9), but since then there has been a tendency in the direction of increase until last year. The diseases which are included under this total and which are usually designated the seven principal zymotic diseases are small-pox, measles, scarlet fever, whooping cough, diphtheria, enteric fever and diarrhœa; those which contributed chiefly to the increased mortality in 1908 were diarrhœa (57), diphtheria (36), and measles (20). Each of these diseases will receive separate consideration, and in the appendix will be found details referring to the ward distribution of these cases as well as the numbers which have been isolated and treated in the hospital. The comparison of the mortality with previous years is set out in the above tabulation.

Smallpox :—

Mortality from Small Pox during the past six years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1.000.	0·01	0·02	0·03	0·02	nil.	nil.	nil.

No case of small-pox was notified during the year 1908, the last case treated in the wards of the Borough Hospital was discharged on September 25th, 1905.

Vaccination :—I am indebted to Mr. A. E. Morgan, the Vaccination Officer of the Derby Union, for the following particulars relating to vaccination for the year 1908, and also for the four preceding years:—

	1904	1905	1906	1907	1908
Births	3318	3129	3143	3188	3309
Deaths of Unvaccinated Children ..	483	380	309	383	264
Insusceptible and Postponed Cases	1	24	25	47	48
Successfully Vaccinated ..	1394	856	407	497	445
Conscientious Objection Certificates ..	218	439	284	363	971

The above table, shewing the small proportion of successfully vaccinated children to the total, and the increase in the number of conscientious objection certificates, shews a very unsatisfactory state of things, and one calculated to cause very considerable anxiety as to the results of the next invasion of smallpox, especially in the absence of hospital accommodation for small-pox in the Borough.

SCARLET FEVER.

Cases Notified	116
Deaths	2

Mortality from Scarlet Fever during the past six years.

Years.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1,000.	0·11	0·07	0·03	0·09	0·04	0·03	0·015

The number of cases of scarlet fever notified during 1908 was 116, and it is satisfactory to note that this is the lowest number for twenty-one years. As regards the distribution of the disease, it was most prevalent in Arboretum Ward with 16 notified cases, followed by Rowditch Ward with 12 cases, and Dale Ward with 11 cases, while the lowest number notified was two in Bridge Ward. The number of deaths from scarlet fever was two only, a mortality rate of 0.015, which is a record for the Borough. The two fatal cases occurred in Friargate Ward and in Normanton Ward. The extreme mildness of the type of the disease is proved by the low case fatality, and the general mortality compares as would be expected, most favourably with the ten years' average in this town, and with that recorded in the great towns and in the country as a whole.

As regards age incidence, the great proportion 72 out of 116 were children of school age, viz., 5 to 15, whilst of the remaining 44 cases, 25 were attacks of children between the ages of 1 and 5. There were 69 of the cases removed to the Borough Isolation Hospital for treatment, and another case admitted for another infection was found to be suffering from scarlet fever; the 2 deaths occurred among these cases.

Measles:—

Mortality from Measles during the past six years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1,000.	0·32	0·04	0·12	0·37	0·02	0·62	0·15

There were 20 deaths from measles in 1908, as compared with 80 in the previous year. In my opinion the most important preventive feature of a measles epidemic is its relationship to school attendance. The apathy with which parents regard an attack of measles is astonishing, and the fact that 20 deaths occurred in one year as compared with 2 from scarlet fever should do much to remove this indifference. The death totals show that all the deaths occurred in children under the age of 5 years, two under one year, and 18 between 1 year and 5 years of age.

Whooping Cough:—

Mortality from Whooping Cough during the past six years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1,000.	0·33	0·27	0·23	0·17	0·24	0·18	0·12

This is another disease which is characterised by epidemics periodically, and is always accompanied by a high rate of fatality, particularly among the very young. So far our preventive measures have done very little in the way of reducing either prevalence or fatality, and it is unfortunately a disease which, with measles, is often regarded as inevitable and one from which all children must sooner or later suffer. No doubt the extensive character of the outbreaks and the extreme susceptibilty to attack of children unprotected by a previous attack, have given rise to the idea. The measure on which most reliance for future success must be placed is educational, and circulars are distributed which describe the earliest symptoms of the onset of the disease, and the measures which should be adopted first to prevent its spread when a child is known to be attacked, and secondly, the general lines of treatment which minimise the risk of a fatal issue in case of attack. The fact that the disease is more fatal in early life than in later years is the argument for postponing by every possible effort the year of attack, for every year that this can be avoided increases most considerably an individual's probability of recovery in case he should ultimately sicken from the disease. There were 15 deaths registered from this disease as compared with 23 and 29 in each of the two preceding years. All the deaths, with one exception, in 1908 were of children below the age of 5 years. These deaths, however, do not represent the full toll which childhood pays to whooping cough, for this disease frequently lays the foundation of future lung mischief such as phthisis or pneumonia.

Diarrhœa:--

Mortality from Diarrhœa during the past six years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1,000.	0·64	0·38	0·68	0·61	0·63	0·34	0·45

The deaths from diarrhœa, which includes the various epidemic disorders of the intestinal tract in infants numbered 57 as compared with 42 and 78 in each of the two preceding years. The mortality rate (per 1,000 of the population) is 0.45, which, though higher than the rate for 1907, compares favourably with the rate 0.65 per 1,000 of the seventy-six great towns. Fifty-two of these deaths were of children under the age of one year, and four under 5 years. This disease is most fatal to infants, and the returns show that between the ages of 5 and 65 no persons suffered from a fatal attack of this disease; at ages over 65, it caused one death. In addition to the diarrhœa deaths, there were 22 deaths registered due to enteritis. The preventive measures have been fully discussed in previous reports and these have been continued during the year under review.

DIPHTHERIA.

Cases Notified	670
Deaths	36

Mortality from Diphtheria during the past six years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1,000.	0·2	0·07	0·25	0·19	0·52	0·42	0·28

The prevalence of diphtheria which has been referred to in the last three reports, still continues, and in the year under review, 670 cases were notified as against 606 in the previous year. Although more cases were notified, fewer deaths resulted, the figures being 36 in 1908, as compared with 52 in 1907, and 64 in 1906, the corresponding death-rates being 0.28, 0.42 and 0.52. The death-rate for the 76 great towns for 1908 was 0.16. Five of these towns had a higher death rate than Derby, while one had the same rate. The case fatality, or the deaths per 100 attacks, was 8.3 in 1905, this rose to 11.3 in 1906, it had declined to 8.8 in 1907, while in 1908 it was only 5.5 per cent. The age distribution of the notified cases and the resulting fatal cases, was as follows:—

between the ages of 1 and 5 yrs. there were 126 cases with 15 deaths
,, ,, 5 and 15 ,, ,, 460 ,, ,, 20 ,,
,, ,, 15 and 25 ,, ,, 47 ,, ,, 1 ,,
,, ,, 25 and 65 ,, ,, 37 ,, ,, 0 ,,

there were no cases notified under one year nor over 65 years of age. These figures show that the most fatal age of attack is between 1 and 5 years of age.

The distribution of the cases, as last year, was fairly general throughout the town; the relationship to the various wards of the notified cases and those resulting fatally, is set out in the following tabulation:—

Ward.	Cases.	No. Isolated.	Total Deaths.
Abbey	39	16	0
Arboretum ...	43	9	4
Babington ...	40	22	2
Becket	33	12	3
Bridge	15	7	1
Castle	46	21	1
Dale	33	12	1
Derwent ...	79	12	5
Friar Gate ...	48	7	0
King's Mead ...	11	8	0
Litchurch ...	38	16	2
Markeaton ...	27	7	2
Normanton ...	36	10	4
Osmaston ..	73	21	4
Pear Tree ...	69	31	6
Rowditch ..	40	13	1
Totals ...	670	224	36

TABLE VIII.—SCHOOLS AND DIPHTHERIA.

	Average Attendance.	Diphtheria Cases.	Incidence per 1,000 attendances.
Ashbourne Road	1805	38	21.0
Nun Street	639	5	7.9
St. Anne's	484	15	30.9
St. John's	481	1	2.07
All Saints'	340	2	5.8
Orchard Street	298	1	3.3
St. Alkmund's	233	2	8.6
St. Mary's	392	1	2.5
St. Paul's	523	64	122.1
Nottingham Road	235	9	38.3
Firs Estate	1445	21	14.5
Parliament Street	203	3	14.7
Practising	379	11	28.9
St. Luke's	617	15	24.2
Curzon Street	314	1	3.1
St. Peter's	295	5	16.9
Traffic Street	737	20	27.1
Trinity	572	15	26.1
St. James' Road	1962	47	23.9
St. Joseph's	287	3	10.4
St. Thomas'	179	1	5.5
Pear Tree Council	1139	29	25.4
Pear Tree Mission	272	6	21.6
St. Dunstan's	537	32	59.5
Old Normanton	263	1	3.8
Brighton Road	847	24	28.3
Canal Street	469	13	27.5
Osmaston	437	10	22.8
St. Andrew's	443	21	47.3
Christ Church	437	9	20.5
Gerard Street	886	17	19.2
St. Chad's	634	8	12.6
St. James'	897	8	8.9

Type of the Disease.—The majority were of a mild type, and cases with laryngeal symptoms were remarkably few in number; the fatal cases were chiefly of the "toxic" variety.

Measures adopted for Controlling the Disease.—These have been detailed in previous annual reports, the chief difference as compared with the preceding few years has been the greater utilisation of the Isolation Hospital for cases of diphtheria, over 200 of these being treated at the hospital in 1908. During the latter portion of the year more extensive use was made of bacteriology, not only in the recognition of cases with doubtful symptoms, but also in the examination of "contacts," both in the home and in school, and also in determining (or otherwise) the period of isolation of each case. Arrangements were also made for preventing the return to school of all children from infected households until bacteriological examination shewed the absence of the Klebs-Loeffler bacillus from the throat. Unfortunately owing to the mildness of the disease, in many cases no medical advice was sought, and these returned to school after slight throat symptoms but with the diphtheria infection in their throats, and so spread the disease in the school; several such cases were treated by the parents as either "influenza" or "bad cold" or "mumps." It may be said without paradox that the mildness of the type of the disease has been its greatest danger in respect of its spread.

The following handbill was fairly extensively distributed in the latter part of the year, especially by some of the school teachers.

COUNTY BOROUGH OF DERBY.

DIPHTHERIA
AND ITS PREVENTION.

Diphtheria is a dangerous and highly infectious disease and is especially prevalent in Derby at the present time. The disease is most fatal in children.

Signs of the Disease.

Diphtheria generally shows itself in the form of *patches* on the throat, the patient complaining of sore throat and feverish symptoms. At the onset the patient may complain of severe headache and there is sometimes vomiting. At first the tonsils are red and swollen, then white patches appear which may extend, the patient rapidly becomes very weak; the neck may become much swollen. In infants the disease may give rise to *Croup* which is rapidly fatal if neglected. Sometimes the disease affects the interior of the *nose*, causing foul discharges, often bleeding. There is a very great tendency to *heart failure* in the course of the disease. *Paralysis* of the throat, eyes and limbs may follow as is shown by the return of liquids through the nose on swallowing, by squint, etc.

Causes.

Diphtheria is usually *spread from one person to another*, and may be spread among children through their sucking toys, pencils, and sweets from another child suffering from the disease. The disease is sometimes spread through milk. Diphtheria occurs in cats and dogs, and the infection may be spread by them.

PRECAUTIONS.

A sore throat of any kind should not be neglected, and if any of the above signs of the disease occur, a doctor should be sent for. On no account should a child presenting any of the above suspicious signs be taken to a doctor's surgery or to a hospital (for in this way the disease may be spread), but a doctor should be sent for.

Persons suffering from suspicious throat symptoms should not enter tramcars or other public vehicles.

If a case is pronounced by a doctor to be Diphtheria, the patient should be separated from the rest of the household, either by having the patient removed to hospital or in some other way suggested by the doctor. If the child remains at home the following precautions should be taken :—

1st. All soiled linen should be placed immediately in a tub of water, to which a handful of washing soda has been added, soaked for twelve hours, and then boiled in a copper. Materials which cannot be boiled should be soaked well for an hour in liquid disinfectant, and then washed.

2nd. Special cups, saucers, and spoons should be used for the patient, and all spare food from the sick room should be destroyed.

3rd. Discharges from the ear, nose, and mouth should be received on a rag and burned at once, as also should any dust collected in the room.

Children should be strictly forbidden to put articles in their mouths which have been sucked or handled by others. When the disease is prevalent all milk should be boiled before using. Cats should not be allowed in the patient's room and those suffering from wheezing or throat symptoms should be destroyed.

When the patient is free from infection the Corporation will undertake the disinfection of the sick room.

Disinfectants are supplied free to patients treated at home.

Children from an infected house must be kept away from school, and not allowed to mix with other children until the Medical Officer of Health certifies that they may safely do so.

PENALTY.

A penalty of £5 is attached to the exposure of Infected Persons and Things.

A. E. Brindley, M.D.,
Medical Officer of Health.

Public Health Department,
Ford Street, Derby.

Printed by Order of the Sanitary Committee, Nov. 16, 1908.

ENTERIC FEVER.

Cases Notified	39
Deaths	4

Mortality :—

Percentage Case Mortality	10.3.
Mortality per 1,000 of Population ...	0.031
,, ,, (76 great towns)	0.08.

Mortality from Enteric Fever during the past six years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908
Rate per 1,000.	0·14	0·6	0·05	0·08	0·10	0·15	0·031

The number of cases notified is the smallest recorded, and is no fewer than 55 below the average for the preceding 10 years; the small mortality rate is also very gratifying. In 1907 there were 74 cases notified with 18 deaths, a case mortality of 24.3 per cent. In 1906 there were 70 cases, deaths 11, and case mortality 15.7 per cent.

Age and Sex Distribution:—

There were 21 males and 18 females.

Age Periods.	0-5 yrs.	5-15 yrs.	15-25 yrs.	25-65 yrs.
Cases ...	3	10	7	19
Deaths	0	0	1	3

Ward Distribution.—There were 9 cases notified in Markeaton Ward, 7 in Babington Ward, 5 each in Friargate and Osmaston Wards, 3 each in Derwent and Kingsmead Wards, 2 in Bridge Ward, and one each in Castle, Dale and Normanton Wards. No cases were notified in Abbey, Arboretum, Becket, Litchurch and Rowditch Wards.

Causation.—As in previous years, the cases have been classified in groups according to probable cause or the absence of any ascertained source of infection. It will be noticed that in a comparatively large number of the cases (41 per cent.) direct infection from previous cases played the chief part in the causation, and of these 16 cases, three were fully trained nurses who had recently been in attendance on cases of enteric fever.

A satisfactory feature is the fact that in only one case was a serious sanitary defect found in connection with the residence of the patient.

Blood Examination.—In only five instances was the blood of suspected typhoid patients examined for Widal's reaction In one case a positive reaction was obtained, in the remaining four cases negative results were found.

Table IX.—An Analysis of the Cases of Enteric Fever notified during the year 1908.

A—*Cases in which Sanitary defects were prominent.*

Progressive No.	Age	Sex	Sanitary Conveniences.				Nuisances.	Remarks.
			W.C.	Pail.	Privy.	Privy Cesspool.		
711	47	M.	1	..	..	..	Drains choked.	Notice served to remedy.

[Case 678 complained of smells from street grating, but house drains in good condition, and no other sanitary defects.]

Cases associated with a previous case.

Progressive No.	Age	Sex	W.C.	Pail.	Privy.	Privy Cesspool.	Nuisances.	Remarks.
42	9	M.	..	1	..	..	.. ..	Direct infection from Cases 1000-1001, 1907.
125	3½	F.	..	..	1	..	.. ..	Direct infection from case 126 (brother).
141	44	M.	..	..	1	..	.. ..	Father of cases 125 and 126.
147	9	M.	..	..	1	..	.. ..	Playmate of case 126 (same street)
148	6	M.	..	..	1	..	.. ..	Brother of case 147. Frequent inter-visiting between cases 125-141, with cases 147 and 148.
352	7	F.	1	..	..	..	.. ..	Contact with case 390.
403	12	F.	1	..	..	..	House requires cleaning. No through ventilation.	Daughter of case 402.
408	14	M.	1	..	..	..	Ditto.	Son of case 402.
421	4	F.	1	..	..	..	.. ..	Sister of case 339.
502	23	F.	1	..	..	..	.. ..	Nurse at Children's Hospital. Has been nursing enteric fever case in hospital.
514	44	F.	1	..	..	..	.. ..	Members of household of case 325 purchased goods at shop of this patient.
573	6	M.	1	..	..	..	.. ..	Brother of cases 339 and 421.
576	34	M.	1	..	..	..	.. ..	Father of cases 339, 421 and 573.
823	22	F.	1	..	..	..	.. ..	Nurse at Royal Infirmary. Infection from nursing enteric fever case.
824	25	F.	1	..	..	..	.. ..	Nurse at Royal Infirmary. Infection from nursing enteric fever case.
980	20	M.	1	..	..	..	.. ..	Mother had enteric fever three to four years ago in same house.

Cases associated with some Article of Diet.

Progressive No.	Age	Sex	Sanitary Conveniences. W.C.	Pail.	Privy.	Privy Cesspool.	Nuisances.	Remarks.
236	26	M.	1	..	..	..	.. ..	Ate freely of oysters at Chatham.
317	15	M	1	..	..	..	.. . .	Ate mussels three weeks prior to onset of illness.
417	32	M.	1	..	..	..	.. ..	Fish and Chip Shop (Mussels)
690	27	M.	1	..	..	..	.. ..	Ate mussels.
947	27	F.	1	..	..	..	.. ..	Ate Mussels a fortnight prior to onset of illness.

Cases in which no suggestion as to Infection was made.

Progressive No.	Age	Sex	W.C.	Pail.	Privy.	Privy Cesspool.	Nuisances.	Remarks.
126	9	M.	..	..	1	..	.. ..	Brother to case 125.
201	17	F.	1	..	..	..	.. ..	
208	35	F.	1	..	..	..	.. ..	
300	9	F.	..	1	..	..	.. ..	
325	57	F.	..	1	..	..	.. ..	Husband of patient away in Manchester during the week.
339	4	F.	1	..	..	..	.. ..	
402	42	M.	1	..	..	..	House requires cleaning. No through ventilation.	
572	..	M.	..	..	..	..	.. ..	H.M. Prison.
574	43	M.	..	1	..	..	.. ..	
605	12	M.	1	..	..	..	.. ..	
658	23	M.	1	..	..	..	.. ..	
733	26	F.	1	..	..	..	.. ..	Case 678 in same street (no direct connection).
870	30	M.	1	..	..	..	.. ..	Platelayer (G.N.R.).
896	17	F.	..	1	..	..	.. ..	Came home ill from Belper.
941	40	M.	1	..	..	..	.. ..	Case 870 in same street (no direct connection).
957	25?	F.	1	..	..	..	.. ..	

PUERPERAL FEVER.

Cases Notified	15
Deaths	7

There were seven deaths registered as due to this disease among the 15 cases notified as compared with one death in seven cases in 1907, three deaths among 11 notified cases in 1906, and four deaths among 13 cases in 1905. The cases notified were four from Markeaton Ward, two from Abbey, Castle and Normanton Wards, and one each from Arboretum, Babington, Friargate, King's Mead and Osmaston Wards. The usual precautionary measures have been continued, they include disinfection of the clothing of the midwife in attendance on the case, and also disinfection of the midwife's residence. In all cases of puerperal fever, a note of enquiry is forwarded to the medical man in charge, asking for particulars relating to the case, and in accordance with the reply received, the midwife is instructed to refrain from attending other cases for varying periods.

Midwives' Act, 1902.—In accordance with the requirements of the Midwives' Act, 56 women, who were registered as midwives, gave notice of their intention to practise within the boundaries of the Borough.

122 notices were received from midwives stating that they had had to send for medical assistance.

134 notifications of still births were received, and 107 visited by women inspectors.

4 letters were forwarded to the Central Midwives' Board intimating changes of addresses, etc.

24 letters were written to midwives on account of failure to notify births, 14 letters *re* unsatisfactory condition of bag, etc., and seven letters *re* failure to notify calling in medical aid.

The whole of the midwives have been regularly inspected by Miss Davies. The record books and outfits were examined, and such failures to comply with the rules of the Midwives' Board as were discovered, were reported to the Medical Officer of Health. In the case of minor defects, a letter was forwarded to the midwife concerned, specifically stating the rules which had not been observed, and requesting future compliance. In cases of failure at the next visit, or in the case of more gross negligence, the midwife was requested to attend at the Health Office for personal interview. Eight midwives in all were thus interviewed.

One midwife was interviewed twice during the year, on the first occasion with reference to the condition of the eyes of two infants, and on the second, for having failed on various occasions to notify births, and for not having sent records of having sent for medical aid.

Bronchitis and Pneumonia.—These two diseases were responsible for no fewer than 209 of the 1,678 deaths registered during 1908. Bronchitis was ascribed as the cause in 142 instances, and pneumonia in 67. The corresponding figures for 1907 were 154 and 86 respectively. Of the 142 deaths due to bronchitis, 29 occurred in children under one year of age, while 64, or 45 per cent., occurred in persons of 65 and upwards. The 67 pneumonia deaths include 19 under one year, 14 between 1 and 5 years, 24 between 25 and 65, and only 6 at 65 and upwards.

The general direction which preventive measures should take would appear to be in the case of bronchitis, greater care with regard to exposure and clothing of young children and elderly persons, etc., the education of the public with respect to the possibly infectious nature of pneumonia, and to the fact that persons with impaired constitutions, whether the result of defective home hygiene or pernicious habits, are those upon whom the pneumo-coccus can most readily exhibit its pathological effects. As a corollary those conditions which tend to improve physique should be encouraged. The ventilation of workrooms and places where people congregate is of great importance. Since dust in excessive amount interferes with the efficient working of the respiratory tract, it would appear desirable that dustless streets should be aimed at and the least dust-raising methods of scavenging should be adopted. In the case of a person attacked it is obvious that careful disposal of the infected sputum is most desirable.

Influenza.—The only information relating to the prevalence of influenza is to be gleaned from the death returns, and these shew that there were 34 deaths ascribed to this disease as compared with 23 in the previous year, and 27 in the year 1906. The largest number of deaths, 17, was registered in the age period 25-65. There were 2 deaths of children under one year of age as compared with 3 in 1907. The largest number of deaths, 6, was registered in Castle Ward.

Cancer.—Cancer or some variety of malignant disease was held responsible for 107 deaths as compared with 114 in 1907, and 92 in 1906. There were 2 deaths from this disease below the age of 5 years, none between 5 and 25, whilst the following two age periods had respectively totals of 68 and 37. Markeaton and Normanton Wards with 11 deaths each showed the highest mortality. In Dale Ward there was only 1 death from this disease.

Violence.—As in 1907, in 56 instances death was attributed to violence, 45 of these cases were accidents, and 11 were cases of suicide. These totals compare with 42 and 14 respectively, in the previous year. One-fifth of the cases of accident were of children under the age of 5 years, and 15 occurred amongst people aged from 25 to 65, this, of course, being the period of activity when risks, whether occupational or otherwise, are most common. All the cases of self-inflicted death occurred also at this age period. Three of these deaths occurred in Castle Ward.

Other Diseases.—There were 187 deaths from heart diseases, compared with 200 in 1907; of these 167 were over the age of 25. The highest number was 16 in Babington Ward, but 14 deaths were registered in each of the four wards, Becket, Friargate, King's Mead, and Litchurch. Of the 32 deaths from alcoholism and cirrhosis of the liver, there were none below the age of 25. Of the 73 deaths registered as due to prematurity, eleven occurred in King's Mead Ward, and none in Friargate Ward. There were eight deaths attributable to "accidents of parturition."

Tuberculous Diseases.—These diseases are classified under two headings, namely, phthisis, or tuberculosis of the lungs, and "other tuberculous diseases," which include tabes mesenterica, tuberculous meningitis, scrofula, and others. In the report for 1906 the importance of phthisis in the annual statistical survey was fully discussed, as well as the measures which have been adopted in this Borough for its prevention.

The deaths from phthisis numbered 115 as against 121 in the previous year, and 113 in 1906; compared as death-rates, these figures represent respectively 0.90, 0.96, and 0.89 per 1,000 of the population—a slight decrease for 1908.

A reference to Table I. will show that the phthisis mortality of the last ten years has been slightly under 1, whilst in the preceding ten years the rate was slightly under 1.4, this reduction represents a decline of over 25 per cent., which must be regarded as highly satisfactory.

The ages at death of these phthisis cases is practically the same as has been noted in the past. One case under one year of age was registered, three under 15, 17 between 15 and 25, whilst between 25 and 65 there were 91 deaths; there were only 3 deaths at ages over 65.

As regards "other tuberculous diseases," the heaviest mortality is observed among children under the age of 5 years, who contributed 47 out of the 73 deaths (20 of the 47 were under one year of age); whilst at all ages over 5 there were 26 deaths. A subdivision of the deaths under one, shows that of the 20 deaths, the localisation of the infection was in the brain and lining membrane in 7 instances, and in the abdomen in 7; the remaining 6 shewed a distribution over the rest of the organs of the body.

Notification.—The number of cases of phthisis notified was 108, while the number of deaths was seven more than this. It is probable then that not more than one-third (at a generous estimate) of the cases existing in the Borough are notified under our present voluntary system. It will be obvious, therefore, that more information as to the existence of these cases is necessary if we are to carry out successfully our campaign against consumption and all its allies. The new legislation regarding this disease is, therefore, to be heartily welcomed. An order made by the Local Government

Board, in pursuance of Sec. 130 P.H.A., 1875, as amended and extended by the P.H. (London) Act, 1891, and the P.H.A., 1896, and dated December 18th, 1908, provides for the Notification to the Medical Officer of Health of Sanitary Authorities of cases of pulmonary tuberculosis occurring amongst the inmates of Poor Law Institutions, or amongst persons under the care of District Medical Officers, and for the taking of certain measures in such cases. The order came into effect in January 1st, 1909, and the details of this very important measure are subjoined:—

Notification on special printed forms by Medical Officers of Poor Law Institutions, and by District Medical Officers, becomes respectively compulsory within forty-eight hours after their first recognition of the symptoms of pulmonary tuberculosis in the cases of (*a*) poor persons (who are inmates of Institutions) by the former to the Medical Officers of Health for the Sanitary Districts in which such persons resided immediately before they became inmates of such Institutions; and (*b*) poor persons (who are in receipt of the Poor Law medical relief) by the latter to the Medical Officers of Health for the Sanitary Districts in which such reside. Further, Superintending Officers of Poor Law Institutions, and Relieving Officers, have to notify within forty-eight hours to the Medical Officers of Health concerned, of destination and address at that place of all persons leaving the Institutions in respect of whom notifications have been made by the Medical Officers of such Institutions; and the latter, any changes of address (other than by admissions into Poor Law Institutions) of persons in respect of whom notifications have been made by District Medical Officers.

The remuneration is (1) for Medical Officers 1s. for the first notification, and 6d. for every subsequent notification of any one case to the same Medical Officer of Health, and (2) for Superintending Officers and Relieving Officers 3d. for every notification. The remuneration is to be paid in the manner and subject to the conditions of the Order by the Councils of the Sanitary Districts for which the Medical Officers act, and it will be deemed to cover the cost of postage.

There is an appeal under the Order to the Local Government Board. It is noted in the Order that nothing therein shall have effect so as to apply to or to authorize anyone to put in force, with respect to a person in relation to whom a notification has been made, any enactment which renders him or any other person liable to a penalty or subjects him to any restriction, prohibition, or disability affecting him or his employment, occupation, means of livelihood, or residence, on the ground of his suffering from pulmonary tuberculosis. The printed notification forms are to be provided by the Poor Law Authorities.

Year.	Private Practitioners.	Institutions.	PoorLaw Cases.	Others.	Total.
July 1st to Dec. 31st,					
1902	35	16	5	..	56
1903	35	62	8	..	105
1904	37	56	10	..	103
1905	32	41	9	..	82
1906	43	62	6	..	111
1907	46	33	19	1	99
1908	49	22	37	..	103

The total notifications received are rather more than the number received in previous years, except 1906. The number reported by private practitioners is higher than in any previous year. The ward distribution of the cases was as follows:—

	Cases Notified.	Deaths.		Cases Notified.	Deaths
Abbey	2	2	King's Mead	18	18
Arboretum	5	9	Litchurch	5	7
Babington	3	3	Markeaton	14	6
Becket	3	8	Normanton	1	5
Bridge	6	7	Osmaston	10	5
Castle	11	10	Pear Tree	6	7
Dale	5	2	Rowditch	4	9
Derwent	6	5		—	—
Friargate	9	12	Totals	108	115

The largest number of cases was thus reported from King's Mead Ward and from Castle and Markeaton Wards information was received of cases in excess of the average. The deaths were also highest in King's Mead, Friargate and Castle Wards. There is a constant variation in the actual totals as observed from year to year, and practically the only constant feature—as has been previously observed—is the unenviable position which King's Mead Ward occupies.

The age incidence of persons attacked and notified in 1908 is shown in the subjoined table, the deaths registered at the same age period are inserted for comparison.

	All ages.	0-15	15-25	25-45	45-65	65 upwards.
Males ...	74	8	12	33	21	0
Females ...	34	4	10	16	3	1
Total ...	108	12	22	49	24	1
Deaths ...	115	4	17	91		3

The notification of males shews an increase in number as compared with last year, whilst the number of females notified is about the same.

The number of specimens of sputum sent for bacteriological examination was 14, of which 2 only showed the presence of the tubercle bacillus, and rather indicates that bacteriological aid is only sought in doubtful cases. Enquiries have been made into the occupations followed by the patients, and the information thus obtained has been tabulated in the subjoined table. The totals vary from year to year, and they show no striking incidence on any particular trade. The textile workers contributed 6 cases as against 8 last year, labourers 33 as against 6, and the various workers in wood stone, and metal 14 as against 25 in the previous tabulation. School children and persons engaged in domestic work contributed 12 and 23 respectively, as compared with 13 and 17 in the previous report.

Textile Workers.

Lace Hands	4
Silk Workers	2
Total	6

Labourers.

General	18
Skin Yard Labourer	2
Others	13
Total	33

Indoor Occupations.

Printer	1
Shop Keeper	1
Baker	1
Clerk	2
Various	2
Total	7

Workers in Wood, Stone, and Metal.

Stonemason	1
Fitters	3
Emery Grinder	1
Joiner and Wood Sawyer	2
Various	7
Total	14

Domestic Duties.

Housewives	20
Domestic Servants	3
Total	23

Children.

School	7
Others	5
	12

Various Occupations.

Hawker	1
Soldiers	2
Gardeners	2
Groundsman	1
Fireman	1
Railway Porters	2
Leather Worker	1
Drayman	1
Telegraph Linesman	1
Varnisher	1
Total	13

Grand Total	108

Causation.—As in previous years, a rough etiological classification of the main factors which have caused (as in Series 1), or predisposed to (Series 2 to 5), consumption, has been attempted. In several of the latter cases, more than one factor has predisposed to the disease, *e.g.*, a case with bad family history, occupation a stonemason, habits intemperate, might be classed under any one of the three Series, 2, 3, and 5. There can be no doubt that habits of intemperance induce a predisposition to consumption, and where there has been a distinct history of drunkenness as a prominent feature, such cases have been classed in Series 5 ("Personal Habits").

SERIES 1.- **Probably direct infection.**

Case 2.—Worked in house in which consumptive died six months before notification. (Brother also died of phthisis).

Case 3.—Brother died three years ago from phthisis. Both patient and brother suffered from fistula.

Case 7.—Two mother's cousins and one cousin died of phthisis. Two brothers died of consumption of the bowels.

Case 13.—Sister died of phthisis.

Case 16.—Brother and sister died of phthisis.

Case 20.—Suffers from consumption of the bowels, age 1½ years. Grandmother, aged 38, died of phthisis.

Case 26.—Mother now ill with Phthisis.

Case 36.—Sister died of Phthisis, and husband probably died of Phthisis.

Case 45.—Mother suffering from Hæmoptysis.

Case 46.—Brother died of Phthisis.

Case 59.—Boy 4 years, father, stonemason, died of Phthisis.

Case 63.—Father died of Phthisis, 1906; also cousin, niece and uncle. Brother now suffering from Phthisis.

Case 77.—Mother died of Phthisis.

Case 79.—Father and uncle died of Phthisis. Has suffered from Pleurisy.

Case 81.—Nursed sister whilst suffering from Phthisis. Brother also suffering from Phthisis.

Case 82.—Father died of Phthisis.

Case 87.—Two daughters died of Phthisis.

Case 99.—Brother and sister died of Phthisis

Case 102.—Brother died of Phthisis.

Case 114.—Wife died from Phthisis.

Case 117.—Mother, four brothers and two sisters died of Phthisis

SERIES 2.— **Family History.**

Case 6.—Two uncles died of Phthisis. Character of work considered to have accelerated onset of illness (Foundry Labourer).

Case 30.—Two maternal aunts and one paternal aunt died of Phthisis.

Case 31.—Mother and brother died of Phthisis.

Case 43.—Father, brother and sister died of Phthisis.

Case 48.—Father died of Phthisis 22 years ago. (Sister at Birmingham suffering from Phthisis).

Case 54.—Father and mother died of Phthisis.

Case 64.—Five persons in family died from Phthisis.

Case 83.—Child of 5, very delicate from birth, two uncles and an aunt died from Phthisis.

Case 98.—Mother and uncle died of Phthisis.

Case 112.—Boy aged 4, delicate from birth, uncle died of Phthisis, and probably sister also.

Case 113.—Five relatives died from Phthisis.

Series 3.—**Occupation.**

Case 5.—Worker amongst Black Lead.

Case 28.—Slater. Is a reservist, went to Aldershot in 1901, slept in damp bed. Has been a heavy drinker.

Case 55.—Tailoress.

Case 58.—General Labourer. Frequently caught cold, delicate physique.

Case 85.—Silk Worker.

Case 94.—Puddler. Suffered from Hæmoptysis.

Case 104.—Drayman. Attributes illness to exposure.

Case 106.—Reservist. Sleeping in wet clothes in South Africa.

Case 115.—Emery Grinder.

Case 116.—Has been Soldier in India and South Africa.

Case 120.—Labourer in Chemical Works.

Case 121.—Stonemason.

Series 4. **Following Illness.**

Case 1.—Boy aged 2. Measles and Whooping Cough.

Case 8.—Child had Pneumonia four years ago, and also two years ago. Born with Spinal Curvature

Case 10.—Following operation to knee.

Case 18.—Suffers from Abscesses.

Case 23.—Aged 3 years. Followed severe Whooping Cough.

Case 29.—Following Rheumatic Fever with Heart Disease and Dropsy.

Case 37.—Said to have suffered from Pulmonary Abscess.

Case 41.—Suffered from Pleurisy and Congestion of Lungs.

Case 44.—Abscesses for six years.

Case 72.—Illness following Confinement.

Case 74.—Illness followed Influenza, 1908.

Case 78.—Illness following Acute Rheumatism.

Case 84.—Child 5 years old, had Whooping Cough in 1907.

Case 86.—Influenza and Bad Colds. Axillary Abscess.

Case 91.—Had Bronchitis and Influenza on three occasions.

Case 97.—Had Pneumonia seven years ago, and Pleurisy.

Case 109.—Had Pleurisy at times.

SERIES 5.—**Personal Habits.**

Case 50.—Bricklayer's Labourer. Heavy Drinker.

Case 51.—Discharged Soldier. Hard life in India, and Intemperate.

Case 52.—Engine Fireman. Works chiefly at night. Bad Colds in winter, possibly somewhat intemperate.

Case 89.—Labourer in Iron Foundry. Very heavy drinker.

Case 95.—Plays Wind Instrument. Moderate Drinker.

Case 103.—Has been a heavy Drinker and neglected himself.

SERIES 6.—**No suggestion as to cause.**

Case 9.—Salesman.

Case 11.—Housewife.

Case 12.—Labourer in Loco. Department, Midland Railway. Now Cattle Drover.

Case 14.—

Case 19.—Aged 18. Said to have overgrown strength.

Case 22.—Hawker.

Case 24.—School Boy.

Case 25.—Cleaner in Common Lodging House.

Case 33.—

Case 34.—Recently left Workhouse Infirmary. Unable to trace.

Case 35.—Housewife.

Case 38.—Patient in Union Infirmary

Case 40.— ,, ,,

Case 49.—Always delicate.

Case 56.—Domestic Servant.

Case 57.—

Case 60.—Died in Union Infirmary.

Incomplete Records.

Case 62.

Case 122.

Case 14.

Case 47.

Case 65.—Girl of delicate physique.

Case 67.—Clerk. Delicate physique.

Case 68.—Delicate physique.

Case 69.—Ditto.

Case 70.—Housewife. Good physique.

Case 71.—Said to have been ill for twenty years.

Case 90.—Discharged Soldier.

Case 92.—Suffers from Anæmia.

Case 93.—Delicate physique.

Case 96.—Ditto.

Case 100.—Fairly good physique. Female, 22 years.

Case 101.—Moderate physique.

Case 107.—Physique poor.

Case 110.—Died in Union Infirmary.

Case 111.—Housewife. Very delicate.

Case 119.—Fairly good physique.

Administrative Measures against Tuberculosis.—A very important memorandum has just been issued by Dr. Newsholme, Medical Officer of the Local Government Board, the text of which is given in full in Appendix V.

MILK SUPPLY.

The farms, dairies, and milkshops within the Borough have been visited and systematically inspected as often as practicable, and structural improvements effected in some cases.* Special efforts were made to bring the farms and farm dairies up to modern standards and considerable outlay has been expended on improved flooring, ventilation, etc., in some instances. It need hardly be stated that much remains to be done in improving the conditions which surround the production, transit, and storage of milk in the town. Special legislation on the question of a pure milk supply is anticipated and awaited with interest.

---

*Details are given in Inspector Wilkinson's report.

WATER SUPPLY.

[For the following particulars I am indebted to Mr. Ward, Borough Surveyor and Waterworks Engineer.]

The Water Supply of the Borough of Derby is derived principally from filter tunnels or culverts 4ft. in diameter, laid in the gravels and shales alongside the river Derwent, in the Parishes of Little Eaton and Allestree, and also from a few springs in the valley of the Bottle Brook, between Little Eaton and Coxbench. The two Storage Reservoirs have a capacity of 2,800,000 gallons, and there are 9 filter beds and 3 service reservoirs of a total capacity of 2,725,000 gallons. Under the Derwent Valley Water Acts, the Derby Borough is entitled to a first instalment of 3¼ million gallons per day, and two future instalments, making a total of 8⅓ million gallons per day. The first instalment under this scheme is expected in the year 1912. In the year 1908, the quantity supplied was 16½ gallons per head for domestic purposes, and 8¼ gallons per head for trade use, giving a total of 24¾ gallons per head per day of an estimated population supplied of 127,800, or an average quantity throughout the year of about 3¼ million gallons per day. It should be noted that the quantity per day sometimes reaches 4¾ million gallons and at the maximum period of drought, may reach for some hours *a rate* of 6 million gallons per day. It should also be pointed out that the area supplied by the Derby Waterworks extends considerably beyond the Borough, and includes Allenton, Mickleover, Spondon, Littleover, Breadsall, Normanton, and Alvaston and Boulton.

Historical.

There appears to have been an organized system of water supply established as early as 1691. The power derived from an artificial fall in the River Derwent was applied by means of a wheel and three small pumps to raise water from the river to the top of St. Michael's Church, from whence it was distributed unfiltered through pipes, four or five hundred yards long. Hutton remarks that "perhaps this is the most useful Church in Derby although preached in but once a month." The supply was intermittent and the pressure was in no case more than 20 or 30 ft. above the ground floor level of the houses. The population of Derby when these works were established must have been small, as about one century later it amounted to only 8,563. The above works appear to have remained about the same as originally formed in regard to condition and extent, except that the lengths of mains were increased to about 2½ miles, until 1848, when the population was 41,098, of whom only about 1.9 per cent. were supplied from the then existing Waterworks, the remainder being supplied from shallow wells. In 1848, a new Company, with a capital of £40,000, was formed, and an Act of Parliament obtained for a better supply of water for the Borough of Derby and certain adjoining Parishes. Under the powers so acquired land was purchased at Breadsall, about three miles from Derby, and the first instalment of the present works was constructed in 1849 and 1850, consisting of a line of pipes collecting springs from the valley of the Bottle Brook, a portion of the filter tunnels alongside the River, and a circular collecting tank 150 feet in diameter, two Cornish Pumping Engines, about 50-horse-power each, supplied with steam from 4 boilers, a pumping main of 18″ diameter and service main also 18″ in diameter, a storage Reservoir of 1¼ million gallons capacity, 3 filter beds, and a Service Reservoir of 800,000 gallons capacity, these works comprising what are known as the Low Level Works. Additional works were erected in 1875, comprising a circular collecting tank 50 feet in diameter, further extensions of the filter tunnels, and 2 rotary single-cylinder pumping engines about 100 horse-power each, supplied with steam from 4 boilers, a pumping main of 20in. diameter, and a service main 18in. (a main of 30in. in diameter has since been laid to the town), a storage reservoir of 1½ million gallons capacity with 4 filter beds and a service reservoir of 1 million gallons capacity, these comprising what are known as the High Level Works. The Service Reservoir at Littleover, two miles from Derby, with an original capacity of 300,000 gallons supplied from the High Level Works, has since been enlarged to a total capacity of 925,000 gallons, and assists in supplying the higher parts of the town. The filter tunnels were extended on the sides of the River Derwent in 1891, and again in 1903, thus increasing the collecting area. Additional pumping plant was erected in 1900 for use in emergencies, and two additional filter beds have been constructed at the Low Level Works.

In 1880, the whole of the works were purchased by the Corporation at a cost of £351,000. The original works of 1849 were designed by the late Mr. Thomas Hawksley, and all later additions by Messrs. T. & C. Hawksley, of Westminster.

CHEMICAL AND BACTERIOLOGICAL ANALYSES.

The Laboratory,
11, Billiter Square,
London, E.C.,
3rd March, 1909.

Report on Samples of Water received on February 24th, from Mr. John Ward, Borough Surveyor, Derby.

The samples comprised two unfiltered waters from the Carr Brook and Tunnel, and three filtered samples from the High and Low Reservoirs and Freeman's Filter Bed respectively. The sample from the Carr Brook had a faint blue colour and was practically free from suspended particles, that from the Tunnel was colourless and contained some fungoid growths, while the filtered samples were quite clear and faintly blue.

The composition was found to be as under :—

Parts per 100,000.	(Unfiltered).		(Filtered).	
	Springs only, Carr Brook	Filter Tunnels.	Low Service.	High Service.
Chlorine	2.15	1.85	2.00	1.90
Sulphuric Acid	4.56	5.28	4.92	5.36
Nitric Acid	2.62	0.48	1.08	0.80
Phosphoric Acid	None	None	None	None
Free Ammonia..	0.0024	0.0110	0.0015	0.0017
Albuminoid Ammonia ..	0.0038	0.0036	0.0037	0.0025
Oxygen absorbed from permanganate at 80° F. in 15 minutes	0.0120	0.0144	0.0128	0.0128
Do. in 4 hours	0.0256	0.0340	0.0276	0.0296
Total Solids dried at 212° F.	32.88	35.68	32.88	33.76
Loss on ignition	3.20	3.60	3.44	3.52
Appearance of solids on heating	No visible change			
Total Hardness	22.0	25.7	22.1	24.2

BACTERIOLOGICAL RESULTS.

	Carr Brook.	Filter Tunnels	Low Service.	High Service.	Freeman's Filter Bed.
Total No. of organisms per cubic cm.	15	14	14	14	14
Do. growing at blood heat	6	2	2	4	4
B. Coli.	Not in 36 cc.		In 20 cc. Not in less.		Not in 36 cc.

The composition of all samples is exceedingly satisfactory. The unfiltered supplies are exceedingly low in organic matter and contain the smallest number of bacterial organisms which I have ever met with in them. Their number is so insignificant that it could not be and was not reduced by filtration. Probably the ground near the Carr Brook and over the filter tunnels is frozen, and impurities cannot enter.

The water as supplied to the inhabitants of Derby is very good, both chemically and bacterially.

Freeman's filter tank contains pure and well-filtered water.

(Signed) OTTO HEHNER.

SCHOOL HYGIENE.

Routine inspection of school children, under the Education (Administrative Provisions) Act, 1907, was not commenced during 1908, largely owing to the departure of Dr. Howarth to take up his duties as Medical Officer of Health to the Kent County Council, on July 1st, and the interval elapsing between this and the commencement of duties of his successor on October 1st. Before the end of the year, however, the appointment of the additional staff necessary for carrying out the work was made, viz. :—

(1) Assistant Medical Officer to the Education Committee, (Dr. E. H. T. Nash, who is specially qualified for this branch of work, being appointed);

(2) School Nurse;

(3) Clerk.

The various appliances, cards, cabinets, weighing and measuring machines, etc., were also obtained, in order that the systematic inspection might be commenced immediately after the Christmas holidays. The following is a specimen of the card used, printed in two colours (blue for girls, and buff for boys).

CONFIDENTIAL.

Derby Education Committee.

To be filled in by the Teacher previous to Inspection.

I.—Name..
(Surname First)

Date of Birth..

Occupation of Parent..

Address I..

II..

III..

IV..

School I..

II..

III..

IV..

II.—Personal History:

(a) Previous Illnesses of Child—

	Before Admission.	Between 1st and 2nd Inspection.	Between 2nd and 3rd Inspection.	Between 3rd and 4th Inspection.
Measles				
Whooping Cough				
Scarlet Fever				
Diphtheria				
Chickenpox				
Other Illnesses				

(b) Family Medical History (if exceptional).

Schedule of Medical Inspection.

Directions to

Parents.	Teachers.
I.	I.
II.	II.
III.	III.
IV.	IV.

General Observations:

		First Inspection.	Second Inspection	Third Inspection.	Fourth Inspectic
1 Date of Inspection					
2 Standard and Regularity of Attendance					
3 Age of Child					
4 Clothing & Footgear					
5 Height—English					
6 Weight—English					
7 Nutrition					
8 Cleanliness & Condition of Skin	Head				
	Body				
9 Teeth					
10 Nose and Throat	Tonsils				
	Adenoids				
	Submax & Cervical				
11 External Eye Disease					
12 Vision	R				
	L				
13 Ear Disease					
14 Hearing					
15 Speech					
16 Mental Condition					
17 Heart and Circulation					
18 Lungs					
19 Nervous System					
20 Tuberculosis					
21 Rickets					
22 Deformities, Spinal Disease, &c.					
23 Infectious or Contagious Disease					
24 Other Disease or Defects					
Medical Officer's Initials					

Throughout the year the same system of inspection of school children as has obtained in Derby for the past five years, was continued, the chief features being the systematic visitation of the various schools in the Borough for the detection and examination of children suffering from

(1) Defective vision,
(2) Defective hearing,
(3) Affections of throat and nose,
(4) Skin diseases and eruptions,
(5) Mental and physical defects.

The following summary gives details of this branch of work in 1908 :—

Twenty candidates for the position of pupil teacher were examined as to their fitness to be placed on the staff. All were regarded as suitable.

Eight teachers resuming duty after sickness were examined as to their fitness to commence duty.

A candidate was medically examined for the post of school attendance officer.

The following children were examined for the various reasons stated :—

At the office on account of various conditions		170
Before admission to the various Industrial Schools	Boys	12
	Girls	2
Re-examined		2
For admission to a Blind School		2
Re-examined		1
For admission to a Deaf and Dumb Institution		5
At the Special School (Admitted, 19; Rejected, 6; Deferred, 0; Others, 91)		116

In addition numerous examinations were made to discover the parasite of Ringworm in cases of a doubtful character, or in which some doubt existed as to whether the disease was quite cured.

The following children were examined at the various schools, and the numbers suffering from different defects were as follows:—

Defective vision	850
Defective hearing	288
Abnormal condition of nose and throat	273
Various skin eruptions	319
Various defects—Physical and mental	167
Total ...	1,897

Defective Vision.—Of the 850 cases examined, 530 were found to be sufficiently serious to justify advising the parents to seek medical advice. This is about the same proportion as has been observed in other years, and, as in the past, refractive errors formed the greatest number. Acute cases were not characterised by undue frequency. As in previous years the number of instances in which spectacles were ordered, but the parents pleaded that they were too poor to purchase them, was fairly considerable.

Defective Hearing.—160 out of the 288 instances of defective hearing which were brought to our notice were of a sufficiently severe character to require medical treatment. Cases of otorrhœa were not so numerous as in previous years. Many of the old cases had been under treatment and were either relieved or cured.

Throat and Nose Cases.—88 of the 273 throat cases presented conditions which ought to have received skilled treatment and the parents were advised accordingly. Enlarged tonsils and adenoidal growths were the chief defects discovered.

Skin Lesion.—Although ringworm and impetigo were the chief conditions from which the children suffered, I think that there was a marked decline in the prevalence of the former ailment. The disease is of so objectionable a character that the fact of such a decline can only be regarded as a cause for considerable satisfaction. 319 children were examined under this heading, and 94 were advised to be excluded from school or placed under medical treatment.

Special School.—The Special School continues to do good work, but there are now no vacant places, and a few children who had

TABLE X.—Cases of Infectious Diseases notified by the Teachers in the various Schools within the Borough.

SCHOOL.	Scarlet Fever.	Measles.	Chicken pox.	Diphtheria.	Mumps.	Whooping Cough.	Throats	Various	Ring Worm.
Ashbourne Road ..	—	8	1	4	—	2	—	—	—
Brighton Road ..	—	—	3	—	2	—	8	—	—
Firs Estate	—	—	—	—	—	—	21	17	—
Clarence Road ..	—	—	1	1	—	—	—	—	—
Gerard Street ..	1	56	—	2	19	11	—	—	1
Nuns Street ..	—	5	—	—	—	—	—	—	—
Nottingham Road ..	—	—	—	2	—	—	—	—	—
Orchard Street ..	—	10	—	—	1	—	3	—	—
Osmaston	—	1	16	—	—	3	—	—	—
Pear Tree Council ..	—	5	11	7	1	8	4	5	2
St. James' Road ..	4	43	1	9	2	—	—	—	5
Traffic Street ..	1	5	2	8	—	—	2	—	—
All Saints'	—	7	2	—	3	—	2	—	—
Canal Street ..	—	—	—	—	—	—	—	—	—
Christ Church ..	—	29	—	4	—	—	—	—	—
Curzon Street ..	—	13	—	—	4	—	—	—	—
Parliament Street ..	—	—	—	—	—	—	—	—	—
Pear Tree Mission ..	—	3	12	—	—	1	—	—	—
Practising	—	—	—	—	—	—	—	—	—
St. Alkmund's ..	—	1	—	—	—	—	—	—	—
St. Andrew's ..	—	1	—	—	—	—	—	—	—
St. Anne's	—	—	—	6	—	—	—	—	3
St. Chad's	3	21	1	3	1	—	—	—	1
St. Dunstan's ..	—	—	—	—	—	—	—	—	—
St. James' Church	1	36	—	—	—	—	—	—	—
St. John's	—	8	6	—	—	9	—	—	7
St. Joseph's ..	—	—	—	—	—	—	—	—	—
St. Luke's	3	8	6	—	—	—	—	—	—
St. Mary's	—	—	—	—	—	—	—	—	—
St. Paul's	1	2	5	—	2	—	45	—	—
St. Peter's	1	4	11	—	—	1	—	—	—
St. Thomas' ..	—	5	5	2	—	—	—	—	—
Trinity	—	7	6	8	2	—	—	—	1
Special	—	—	—	—	—	—	1	—	—
Total	15	278	89	56	37	35	86	22	20

been passed as suitable for admission had to wait until vacancies arose. The following visits were made to the school for the purpose of examining children as to their suitability for admission, and also for considering the progress of the children in attendance.

	Number of Children.			Sent for but did not appear.	Number examined in attendance.
	Admitted.	Rejected.	Deferred.		
Total ...	19	6	0	4	91

Notification of Infectious Diseases.—The notification of cases of infectious diseases by the head masters and mistresses to the Medical Officer of Health has continued. In the year under review the number of cases so notified was 638 as against 2,256 in the previous year. The enormous difference in these totals is due to the fact that 1907 was a "measles" year, and to the aggregate, that disease alone contributed 1,621 cases, as against 278 in 1908, and 14 in the year 1906. This very fact alone shows the extent to which this disease interferes with school work, and any action, therefore, which can be taken to limit its extension should be taken advantage of; the necessity of notification of first cases has frequently been emphasized. The number of cases of scarlet fever which have been notified has again been fewer, viz., 15, as against 24 in 1907, and 29 in 1906; the cases of chicken-pox were less numerous, while cases of diphtheria diminished from 89 to 56. (See Table X.)

HOUSING OF THE WORKING CLASSES.

Eight houses were dealt with under Part II. of the Housing of the Working Classes Act; details are tabulated below:—

Address of Property.	Number of Houses Concerned.	Action Taken.
Nottingham Road, Cottage, Canal Side...	1	Closing order obtained
Carrington Street, 6, 7, 8, 9, 10, 11, and 12, Whiteman's Yard	7	Houses rendered habitable

REPORT ON WOMEN INSPECTORS' WORK, 1908.

The following report has been prepared by Miss Davies, Senior Woman Inspector:—

The work of our Department has been increased during the past year by the adoption of the Notification of Births Act, which provides for the notification of a birth within 36 hours of its occurrence, by the father or person in attendance, also by the doctor or midwife. It is gratifying to note that in Derby the provisions of the Act have been carried out without any friction, and it has only been necessary to caution *three* midwives for neglecting to notify as required.

It is a decided advantage to have this information earlier as it enables us to advise the mother earlier as to the care of her health, the choice of foods which will assist her in continuing to breast feed, and, if necessary, to urge her to obtain medical advice for herself or her child. We have come across during the past year 125 cases (16 of them of very serious nature) in which the children's eyes required attention; it is pitiful to see a child of a few days old with its eyes puffed and inflamed, and the mother endeavouring to cure this herself with some concoction of her own; in these cases we have urged them to obtain medical advice, and they are revisited frequently to ensure that this has been done. One mother described the effect as "wonderful" and bitterly regretted that she had not had an older child's eyes attended to in time, the one she referred to being quite blind.

We also have a greater opportunity to advise on the importance of woollen underwear for the young infant; it is indeed curious to notice that whilst the natural tendency seems to be to clothe children of 12 to 18 months in woollen vests, the clothes provided for the baby during the first and most precarious months of its life include the old-fashioned cotton shirt.

In cases where we have paid a second visit it has given us great pleasure to find that our suggestions have often been carried out; we have this year, in addition to our first visits paid 1,810 revisits. During our visits we confine ourselves to the most reasonable suggestions—to mention one—that of feeding at the proper time, it is surprising to find how few pay attention to this apparently simple proceeding, yet, what a world of trouble and anxiety neglect to it may cause. I was once told in all seriousness that the mother wouldn't think of giving the child food any oftener than every quarter-of-an-hour. In all 3,969 first visits have been paid. Nurse Cash has paid 1,762 revisits, where further advice was needed.

172 visits have been paid to the homes of school children suffering from non-notifiable diseases, chiefly measles.

Four Schools have been visited to ascertain the addresses of scholars not notified, and two visits have been paid for the purpose of arranging for Disinfection of a School where an outbreak of measles was threatened.

INSPECTION OF WORKROOMS.

There are now 187 Workrooms on the Register (where women are employed), of these 21 were notified during 1908.

Their general condition is decidedly above the average, but in one instance, that of an unsuitable basement, which had to be lighted by gas during the day, where the ventilation was insufficient, and no heating apparatus provided, a notice was served upon the occupier to discontinue using it as a workroom; a room on the ground floor was taken, and this complies with the requirements of the Act.

All workrooms have been inspected, 21 were found to require cleansing, 3 were overcrowded, 2 were found to have insufficient means of ventilation, in 3 cases there was no Abstract fixed, 1 w.c. flush was defective. All of these, with the exception of two, were remedied. In all 265 visits have been paid.

INSPECTION OF OUTWORKERS.

Lists have been received from the various firms employing outworkers, twice during the year, also from other Councils who have Factories in their district employing outworkers in this Borough.

804 inspections have been made of the homes of the outworkers; their condition was generally speaking, good; advice is given where dirty conditions are found. Eleven

notices were served requiring the cleansing of the premises, and these have been complied with. The homework in Derby is particularly pleasant when compared with that of other towns, this being the case a great number of the homeworkers are found among the skilled artizan class to whom the work affords an acceptable addition to the income.

MIDWIVES ACT.

During the past year 56 midwives notified their intention to practice. 28 are bona fide, and the others have received some training, of these three act as maternity nurses solely.

53 of the practising midwives have notified 2,060 cases. Each midwife (with the exception of those practising in Public Institutions) has had her outfit inspected. In the cases of the more competent women two visits a year are sufficient, but a far greater number are necessary in the cases of the more ignorant or neglectful ones. There is a decided improvement in their outfits generally and the rules are more strictly kept.

During the past year, 134 notifications of still-births were received as compared with 35 of the previous year; for the first time an enquiry has been instituted to discover the possible cause. Enquiries have also been made of the midwives in attendance on some of the cases. 122 notices of having sent for medical aid were received as compared with 65 of 1906. Fourteen letters have been sent calling attention to the unsatisfactory condition of bag or appliances, etc., and eight midwives have been interviewed by the Medical Officer of Health at the Public Health Offices, while seven letters were sent for failure to notify having sent for medical aid, and 24 for having failed to notify births.

Summary of Women Inspectors' Visits.

First Visits *re* Births	3969
Second Visits *re* Births	1810
Visits *re* Deaths	204
Visits to Workrooms	265
,, to Outworkers' Premises	804
,, *re* School Cases	172

Visits *re* Phthisis	43
,, in connection with cases of Puerperal Fever	13
,, to Midwives	97
,, *re* Still Births	107
,, to Schools *re* notifying infectious ailments and disinfection	6
Unsuccessful Visits	1044
Visits to Workrooms *re* air samples	10
Total number of Visits	8654

Nurse Cash's Visits:—

Re Infants	1762
Re Phthisis	409
Unsuccessful Visits	304
	2475

Factories and Workshops.—The following table classifies the Workshops in the Borough in each Inspectorial District, and the number of visits made to each:—

LIST OF WORKSHOPS.

No. on Register. Inspectorial Districts.				Trade.	No. of Inspections. Inspectorial Districts.			
A.	B.	C.	W'm'n		A.	B.	C.	W'm'n
..	..	1	..	Asphalte Works	..	..	..	..
5	..	..	..	Aerated Water	..	..	..	..
1	..	..	..	Artificial Teeth	..	..	..	..
..	..	1	..	,, Limb	..	..	..	..
13	..	11	..	Boot Repairer	..	..	..	..
..	7	..	..	Boot Makers	..	..	..	..
2	1	1	..	Basket Makers	..	..	..	..
..	3	6	..	Blacksmiths	..	..	..	..
2	..	..	..	Blind Makers	..	..	..	..
1	..	..	..	Brush Maker	..	..	..	..
1	4	1	..	Bicycle Makers	..	..	..	..
..	1	..	..	Beer Bottler	..	..	..	..
3	5	1	..	Cabinet Makers	..	..	..	..
2	..	..	1	Confectionery Works	..	..	..	1
..	3	1	..	Coach Builders	..	..	..	..
..	..	1	..	Carpenter	..	..	..	..
1	1	..	..	Dyer	..	..	..	..
1	..	..	..	Drug	..	..	..	..
2	..	..	101	Dressmakers	..	..	..	93
..	..	1	..	Drysalter	..	..	..	..
1	..	3	..	Furniture Makers	..	..	..	..
..	..	1	..	Furniture Polishers	..	..	..	..

LIST OF WORKSHOPS—continued.

..	1	..	..	Fruit Preserving	..	..	..	..
1	1	..	..	French Polishers	..	..	..	..
..	1	..	..	Gun Repairer	..	..	..	..
1	..	..	..	Hairdressing	..	..	..	..
..	..	..	1	Hosiery Makers	..	..	..	1
1	..	..	..	Ice Cream Powder	..	..	..	..
..	1	..	..	Iron Warehouse	..	..	..	..
10	..	2	..	Jewellers	..	..	..	..
7	3	..	..	Joiners	..	..	..	..
1	..	..	..	Lemon Curd Maker	..	..	..	..
..	1	..	..	Locksmith	..	..	..	..
..	1	..	..	Leather Laces	..	..	..	..
..	..	1	..	Leather Currier	..	..	..	..
..	1	..	..	Lamps, etc.	..	..	..	..
..	..	..	6	Laundries	..	..	..	5
1	..	..	..	Machines	..	..	..	..
..	4	..	..	Maltsters	..	..	..	..
..	..	..	41	Milliners	..	..	..	41
..	1	..	1	Manufacturing Chemist	..	..	..	3
..	..	..	1	Net Mender	..	..	..	1
2	1	..	1	Pickling	..	..	..	1
7	2	6	..	Plumbers	..	..	..	..
..	1	..	..	Pipe Clay	..	..	..	..
..	1	..	..	Picture Framer	..	..	..	..
..	1	..	..	Plaster Figure Maker	..	..	..	..
3	..	3	2	Photographers	..	..	..	2
..	..	2	..	Paper Bag Makers	..	..	..	..
..	..	..	3	Pinafore Makers	..	..	..	4
..	2	..	..	Rag Sorting	..	..	..	..
2	..	..	..	Rope Makers	..	..	..	..
..	3	2	..	Saddlers	..	..	..	..
1	..	..	..	Stone Mason	..	..	..	..
6	1	..	..	Shoe-smiths	..	..	..	..
..	3	..	..	Spa Turners	..	..	..	..
..	1	..	..	Surgical Bandage Maker	..	..	..	..
..	1	..	..	Stove and Grate Works	..	..	..	..
..	..	1	..	Sign Writer	..	..	..	..
..	..	..	1	Straw Hats	..	..	..	2
48	14	8	41	Tailors	..	..	..	44
4	2	1	..	Tinsmiths	..	..	..	..
..	..	2	..	Tin Plate Workers	..	..	..	..
..	..	1	1	Tea Packer	..		..	1
..	..	1	..	Tarpaulin Maker	..	..	..	..
3	1	2	..	Upholsterers	..	..	..	..
2	..	1	..	Umbrella Makers	..	..	..	..
..	..	1	..	Watch Repairing	..	..	..	..
1	4	2	..	Wheelwrights	..	..	..	..
..	1	..	..	Weighing Machine	..	..	..	..
..	..	..	..	99 Bakehouses	..	..	..	..
136	79	65	201	Totals.	..	..	..	199

The following are the tables of action taken and work done, which are required to be forwarded to Secretary of State.

1.—INSPECTIONS.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of Inspections.	Number of Written Notices.	Number of Prosecutions.
Factories (including Factory Laundries)	58	5 & 2 Verbal.	0
Workshops (including Workshop Laundries)	1047	34 & 3 Verbal.	0
Work Places (other than out-workers' premises)	0	0	0
Total	1105	39 & 5 Verbal.	0

2.—DEFECTS FOUND.

Particulars.	Number of Defects Found	Number of Defects Remedied.	Number of Defects Referred to H.M. Inspector	Number of Prosecutions
Nuisances under the P.H. Acts—				
Want of Cleanliness ..	26	26	0	0
Want of Ventilation ..	8	6	0	0
Overcrowding	5	4	0	0
Want of Drainage of floors	0	0	0	0
Other Nuisances	15	15	0	0
Sanitary Accommodation—				
Insufficient	3	1	0	0
Unsuitable or Defective ..	8	7	0	0
Not separate for sexes ..	0	0	0	0
Offences under the F. & W. Act—				
Illegal occupation of underground bakehouse (S. 101)	0	0	0	0
Breach of Special Sanitary requirements for Bakehouses (SS. 97 to 100)	105	97	0	0
Other Offences	0	0	0	0
Total	170	156	0	0

3.—HOME WORK.

	Nature of Work.		
	Making Wearing Apparel.	Making Lace and Net.	Total.
Twice a year—			
Lists	84	10	94
Contractor's Outworkers ..	2	0	2
Workmen	409	803	1212
Once a year— ..			
Lists	9	0	9
Workmen	27	0	27
Addresses of Out-workers—			
Received from other Councils	16	0	16
Forwarded to other Councils	78	0	78
Outwork in Unwholesome Premises—			
Instances	102	2	104
Notices Served	11 Written 91 Verbal	2	91 Verbal 13 Written
Inspection of Premises ..	804	11	815
Notices served to remedy Defects	0	0	0
Outwork in Infected Premises	3	7	10

4.—REGISTERED WORKSHOPS.

	468
Bakehouses	99
Total	567

5.—OTHER MATTERS.

Notified to H.M. Inspector of Factories :—		
Failure to affix Abstract (S. 133)		3
Action taken in matters referred to H.M. Inspector as remediable under the Public Health Acts but not under the Factory & Workshops Act (S. 5)	Notified by H.M. Inspector	28
	Reports sent to H.M. Inspector	24
Complaint returned as " No action necessary "		0
Underground Bakehouses (S.101)		
Certificates granted during the year		0
In use at the end of the year		1

Table XI.—Showing the means of the Meteorological Observations taken at the Derbyshire Royal Infirmary for the 12 months ended 31st December, 1908.

1908.	Thermometers.				Rainfall in inches.		Greatest fall in 24 hours.		No. of Rainy days, 1908.
	Dry Bulb.	Wet Bulb.	Shade Temperature.		Infirmary Grounds 1908.	1907.	Amount in inches.	Date.	
			Maximum.	Minimum.					
January ...	34·9	33·8	41·5	30·0	1·16	1·21	·30	6th.	19
February...	41·4	39·7	49·6	36·4	1·35	2·08	·24	16th.	18
March ...	39·7	36·9	46·3	33·9	2·41	1·46	·44	24th.	17
April ...	43·2	40·3	49·7	36·6	2·35	1·66	·48	28th.	16
May ...	56·3	51·9	63·9	47·5	2·27	3·73	·56	2nd.	13
June ...	58·7	54·1	67·0	49·1	1·54	3·35	·56	1st.	8
July ...	62·9	57·5	69·4	53·0	2·51	2·75	·59	8th.	10
August ...	60·0	56·2	67·0	50·6	4·02	3·24	·68	26th.	14
September	55·5	53·3	62·7	48·4	1·54	·72	·36	3rd.	16
October ...	51·5	50·6	60·3	46·9	1·07	3·65	·34	27th.	14
November	44·4	43·1	50·5	40·5	1·67	1·87	·30	12th.	14
December	38·1	37·4	43·1	34·0	1·60	2·76	·30	15th.	21

The highest mean shade temperatures were registered during the month of July. The greatest variation between the maximum and minimum temperature was observed during the months of June, July and August. January was the coldest month, and most rain fell during the months of July and August. The greatest number of rainy days was observed in December, January and February. The heaviest amount of rainfall in twenty-four hours was on the 26th August, when 0.68 inches fell. The nearest approach to this was on 8th July, when 0.59 inches fell.

Sanitary Inspector's Report, 1908.

Ford Street Stables.

(Administered under the direction of the Plant & Stores Committee).

Number of Horses at beginning of year ...	59	
Bought during the year	6	
	—	65
Disposed of		8
Inspector's Department	38	
Surveyor's Department	14	
Police and Fire Department	5	
	—	57

Privy and Ashpit Cleansing.

Night-work—Privies Cleansed	5177
,, Ashpits Cleansed	2847
,, Privy Cesspools Cleansed	439
Day-work—Dry Ashpits Cleansed	649

Refuse Collected.

Night-work—Loads (Excreta only)	5141
,, ,, Ashes and Excreta	2679
,, ,, Ashes only	2245
Day-work— ,, Ashes, etc.	25757
Offal and Trade Refuse carted by Producers—Loads ...	1070
	36,892

Refuse Disposal.

Disposed of as Manure—By Boats, 284 loads.
By Customers' own carts, 355 tons, 9 cwts.
Delivered to Farmers from pits, 2,073 cart loads.
Deposited on Tips, 5,055 cart loads.
Burned in the Destructors, 23,427 tons, 13 cwts.
Extracted from Refuse & Sold, 11 tons, 2 cwts., 2 qrs. of Scrap Iron
53 tons, 12 cwts. of Scrap Tins.
8 gross of Jars.

Cost calculated on Wages only.

		Average No. of Men, including hired.	Loads.	Wages only, including hired men.
Collection	Day	46·36	25,757 @ 2/3·01	£2,899 15 9
	Night	26·75	10,065 @ 3/4·67	£1,705 16 10
Disposal – Chester Depot		43·66	29,164 @ 1/10·09	£2,685 3 6½

Sanitary Accommodation.

It is some years since any inquiry was conducted to ascertain the precise accommodation provided in connection with the storage and removal of house and other refuse, but an effort has been made year by year to estimate this provision as nearly as possible, by keeping account of additions and deductions, and the following information may be taken as fairly accurate:—

Ordinary Water Closets	(Cistern Flush)	20359
,,	(Hand Flush)	91
Trough Closets	Burmantoft	213
	Tipper or Syphon	189
	Hand Flushed	42
Tub Closets		4042
Dry Ash Receptacles		21168
,, Pits		1116
Privies		2867
Ashpits connected with above		1094
Privies		683
Cesspools connected with above		559

Bakehouses.

Bakehouses in occupation, January, 1908	104	
New Bakehouse built and occupied	1	
Empty Bakehouses re-occupied during year	0	
		105
Tenancies given up	6	
Total occupied Bakehouses in Borough		99
Unoccupied January, 1908	38	
Since vacated	6	
		44
Demolished	0	
Places re-occupied	0	
Total unoccupied Bakehouses		44
Visits to unoccupied Bakehouses	125	
Visits to occupied Bakehouses	478	
	603	

Sanitary Work—

Defects found	105
Remedied	97 (including 6 from 1907, 14 carried forward to 1909.)

Notices given—Verbal, 58; Written, 5.

The following 6 nuisances included in above were dealt with on receipt of reports from His Majesty's Inspector of Factories:—

Limewash	4
Dirty Floor	1
Effluvium	1
	6

Canal Boats.

1. Inspector and Salary. Chief Inspector and Assistant. No salary allocated.

Address: Sanitary Offices, 16, Ford Street, Derby.

2. Boats Inspected, 42. Visits to Canal, 98.

3. Infringements of Acts and Regulations.

a.—Registration ...	0	*b.*—Change of Master ...	0
c.—No Certificate on Board	2	*d.*—Absence of Marking	0
e.—Overcrowding ...	3	*f.*—Separation of Sexes...	0
g.—Cleanliness ...	0	*h.*—Ventilation ...	0
i.—Painting	0	*j.*—Provision of Water Casks ...	0
k.—Removal of Bilge Water ...	0	*l.*—Notification of Infectious Diseases ...	0
m.—Admittance of Inspector ...	0	*n.*—Boats found in bad repair ...	0

4. Legal Proceedings, None.

5. Other steps taken: Five caution forms sent, and complaints cleared.

6. Cases of Infectious Disease dealt with, None.

7. Detention of Boats for Cleansing and Disinfecting, None.

8. Number of Boats on Derby Register at end of year 1908, 31.

9. Number of Boats Registered during the year 1908, None.

Common Lodging Houses.

One house has been registered, another transferred to a new tenant, and several minor alterations made in the number of lodgers allowed.

The present accommodation provided is:—

20 registered houses, having 131 sleeping rooms, with convenience for 679 adult persons and 23 children.

Visits of Inspection	1,089
Notices given, verbal and written	226
Breaches of Bye-laws remedied	298

Houses Let in Lodgings.

On Register at beginning of 1908	41	
Added during 1908	1	
	—	42
Closed during 1908	11	
On Register at end of year		31
Visits of Inspection		1,762
Notices Served		234
Contraventions of Bye-laws remedied ...		245

Dairies, Cowsheds, and Milkshops.

Registered as Cowkeepers within the Borough:—

On Register, January, 1908	28	
New Registrations	1	
	—	29
Removed from Register	5	
Leaving on Register		24
Inspector's Visits	130	

Registered as Dairymen and Purveyors within the Borough:—

On Register, January, 1908...	408	
New Registrations	80	
	—	488
Removed from Register	70	
Leaving on Register		418
Inspector's Visits		1,921
Notices Served		251
Nuisances Abated		293

Registered Purveyors who live outside the Borough:—

On Register, January, 1908...	153	
New Registrations	6	
Total on Register		159

Diseases of Animals Acts.

(Administered under the direction of the Markets Committee).

Four outbreaks of Swine Fever have been reported during the year, affecting 77 swine, but the existence of disease was verified and certified in one instance only, where 65 swine were concerned. The animals and premises were kept under close supervision for some months, all animals slaughtered being inspected to see that they were free from disease before any carcase was allowed to be removed for sale. Swine which had been in contact were also placed in quarantine, all premises thoroughly cleansed and disinfected, and periodical reports rendered to the Board of Agriculture and the Local Committee.

Four post-mortems were made by our Veterinary Inspector, and every possible step taken to prevent the spread of infection, and fortunately the outbreak was confined to this one centre.

New instructions and restrictions are continually being issued from "The Board," and the Borough still remains under Order for the weekly cleansing and disinfection of pig dealers' appliances, carts, sheds, and premises. This Order and another restricting the movement of swine have been so long in force that they may be regarded as permanent, and consequently adding an amount of continuous work, which a few years ago was only occasional, and could be undertaken with a temporary displacement of other duties; but to these additions there must be a limit, and I have been compelled to ask for increased assistance. In connection with swine movement alone, over 1,300 licenses have been issued, very many of which have had to be triplicated and copies posted to other towns, thereby largely increasing office and clerical work.

For two years now we have been placed under restriction as regards Sheep Scab, which has necessitated personal attendance in the Cattle Markets on Market days, and the issue, collection, and tracing of some hundreds of licenses and documents.

As Sheep Scab is still prevalent in the Country, there is every probability that this Order will become permanent, and the increase of work must be met, as trying to cope with such diseases by any half measures is worse than useless, and in addition to widespread inconvenience and danger, means heavy loss, not only to stock producers, but also to the revenue takings of our Markets.

The dipping of all sheep within the Borough has also to be supervised and enforced.

Removal of Nuisances.

In addition to the amount of work done by Preliminary Notices as recorded in the table of Nuisances Abated, it was necessary to report six cases for Legal Proceedings, five of them being for the provision of new regulation tubs to closets, in each of which the notice was complied with. The sixth case was of greater magnitude, as it covered the building of new water closets and the entire reconstruction of the whole of the drains to a block of ten houses, owned by six different parties. When the notices were served, practically the whole of the owners were willing for the work to proceed, but one took the most unusual and extreme course of appealing against the requirements made by the Sanitary Committee, and at the end of the year the matter had not been settled.

A considerable number of complaints from His Majesty's Inspector of Factories, have been dealt with, but no provision has yet been made for the detailed and periodical inspection of Workshops.

Particulars of work done in the improvement of Factory and Workshop sanitation have been supplied to the Medical Officer of Health for inclusion in his special report under the Act.

NUISANCES ABATED.

		A	B	C	X	Total.
Ashpits ...	Demolished	78	47	125	...	250
Drains ...	Cleansed and Repaired (or Soil Pipes)	92	339	350	...	781
	Disconnected from Sinks	1	4	...	...	5
	Provided (or Soil Pipes)	188	125	347	...	660
	Re-laid and New	311	372	593	...	1276
	Removed from Inside Houses ...	4	18	41	...	63
	Cut-off from Stream	...	...	1	...	1
	Soil Pipes Removed from Inside Houses	3	7	1	...	11
	Brick Replaced by Salt-glazed Pipes	6	46	...	...	52
	Inlets Trapped and Inspection Chambers Provided or Repaired ...	651	407	670	...	1728
	Soil Pipes and Drains Ventilated ...	125	78	121	...	324
	Waste Pipes Repaired, Renewed, &c.	3	23	27	...	53
Houses ...	Cleansed	6	20	67	...	93
	Cellars Cleansed and Limewashed ...	4	14	33	...	51
	Damp Coursed and made Dry ...	3	19	12	...	34
	Overcrowding Prevented	1	4	..	...	5
	Ash Bins provided	134	100	244	...	478
	Soft Water Cisterns provided ...	...	4	...	...	4
	Dangerous Walls or Buildings Repaired	1	8	...		9
	Paving of Yards and Passages ,,	166	188	282	...	636
	Roofs, Floors, &c. ... ,,	6	46	56	...	108
	Spouting Repaired, Disconnected or Provided	35	125	152	...	312
	Rooms Ventilated	1	...	12	...	13
Privies ...	Cleansed and Repaired, or new Tubs Provided	499	359	294	...	1152
	Converted to W.C.'s	153	117	245	...	515
Urinals ...	Erected	...	7	2	...	9
	Removed	...	3	3	...	6
	Repaired	...	1	1	..	2
Water ...	Soft Water Tanks Cleansed and Repaired and Pumps Repaired ...	9	24	38	..	71
	Disused Wells Filled in	3	18	26	...	47
	Houses Provided with Town Water ...	1	...	6	..	7
W.C.'s ...	Cleansed or Repaired	3	15	28	...	46
	Flushing Water Laid on	5	6	...	..	11
	Additional Provided	1	10	2	...	13
	Fittings Repaired	45	52	34	..	131
	Ventilated	...	1	...	...	1
Bakehouses,	Contraventions Remedied ...	...	...	...	97	97
Common Lodging-houses	,, ,, ...	...	...	...	298	298
Dairies, Cowsheds and Milkshops	,, ,, ...	...	...	...	293	293
Factories and Workshops	,, ,, ...	9	4	51	...	18
Houses Let in Lodgings	,, ,, ...	...	...	...	272	272
Smoke Nuisances	,, ,, ...	...	2	2	...	4
Accumulations of Manure, &c., removed, and Premises Cleansed		4	10	23	...	37
Fowls or Animals removed		17	6	12	...	35
Manure Pits or Cesspools removed		8	30	6	...	44
Swill Boiling discontinued		...	...	1	...	1
Stagnant Water removed		...	5	26	...	31
Ice Cream Premises		..	...	...	5	5
Offensive Trades		...	...	...	20	20
Stables Drained or Paved		7	2	9	...	18
Manure Pits Provided		...	3	...	...	3
		2583	2669	3897	985	10134

Ice Cream Premises.

Number of places on books, January, 1908 ...	255	
Added during year	29	
Struck off the list	2	
On books at end of year		282
Notices Served		5
Nuisances Abated		5
Inspector's Visits		320

POLICE COURT PROCEEDINGS.

No. of Cases	Complaint.	Results.	Total Costs. £	s.	d.
1	Selling Watered Milk ...	Fined 5s. and Costs	1	4	0
1	Ditto	Fined 2s. 6d. & Costs	1	1	6
1	Selling Milk deficient in Fat to extent of 5·07 %	Fined 40s. and Costs	3	0	0
1	Selling Milk 12·0 % deficient in Fat	Ditto	3	6	0
1	Selling Milk 3·0 % deficient in solids not Fat	Pay Costs			
1	Selling Milk from which 9·0 % of Fat had been abstracted, and 20·0 of water added ...	Fined £5 and Costs for abstraction of Fat, and pay Costs on other charge ...	7	8	6
1	Selling Milk which contained 20·0 % of added water ...	Pay Costs			
1	Delivering Margarine in unmarked wrapper	Fined 5s. and Costs	0	19	0
1	Ditto	Adjourned from 1907, and now withdrawn			
1	Exposing for Sale Unmarked Margarine	Ditto			
1	Selling Butter containing an excessive amount of water (17·2 %)	Dismissed on produc- of warranty from Wholesale Dealers			
1	Ditto	Dismissed on produc- of warranty from Foreign Dealers ...			
1	Being in possession of carcase of Beef, being that of tuberculous Cow	Pay Costs	0	15	0
1	Selling adulterated Brandy ...	Fined 10s. and Costs	1	10	0
1	Selling adulterated Whiskey .	Dismissed. Notice posted in Bar ..			
1	Selling adulterated Brandy ...	Fined 5s. and Costs	1	6	0

Registered Slaughterhouses.

In use at end of 1908:—

In hands of private holders	49
Corporation houses let to private tenants	15
Corporation houses used as public	3
Corporation houses standing empty	3
Private houses standing empty	3
	73

Visits of Inspection	7,266

Two Corporation houses used for Tripe dressing.

By direction of the Sanitary Committee, I have made a special personal inspection of the Slaughter-houses within the Borough, and reported as follows:—

We have, to-day, within the Borough 75 Slaughter-houses, 52 owned by private persons, and 23 by the Corporation. Of the latter 18 are let to private persons, 3 are used as public, two as triperies.

With respect to the 9 oldest slaughter-houses owned by the Corporation, they are undoubtedly the most insanitary structures in the town, owing to defective and offensive drainage and the fasting pens entirely inside, and I have so reported upon these directly to the Markets Sub-Committee who had the matter in hand.

I would however urge, that one slaughter-room to be altered, which the Markets Committee have agreed shall be used for public purposes, should be lined in the lower part with white glazed bricks as an example of what it should be.

The other 14 Corporation houses are of recent construction and free from the worst features of the older ones, but they have the drain gullies inside, which I consider a decided objection—otherwise they are amongst the best.

Dealing generally with existing private slaughter-houses, scattered as they are all over the Borough, one point has impressed itself upon me, viz., that anything meriting the name of inspection of the carcases slaughtered could not possibly be accomplished by one or even two Officers; and that until one place only is established for the slaughter of all animals, with central inspection of all meat offered or intended for human food, we shall be largely dependant upon the knowledge, care, and honesty of our master butchers, the occupiers of slaughter-houses, and the assistants employed.

Very much may be done, however, to improve the houses, and the conditions under which the slaughter and setting of meat takes place.

From the sanitary standpoint, slaughter-houses, whether public or private, can only be regarded as necessary evils. The chief consideration then, becomes, not one of perfection, but as reasonably near to it as can be got.

The principal items may be dealt with under two main heads:—

(1). The structures themselves, their fitness for the purpose, and possibility of improvement.

(2). Their situation, approach, surrounding and special considerations with regard to nuisance from use.

The structures are mainly of red brick and limewashed, with occasionally parts formed of wood, and having blue brick stone or concrete floors, with nearly always a trapped gully connected with the sewers situate inside the slaughterhouse.

The best feature of all the places inspected is the provision of ample ventilation, and the almost invariable supply of town water for the purpose of cleansing carcases, and premises.

In every instance vessels of some kind were provided, not always of impervious material or well kept, for the removal of manure and offal, the provision of adjacent manure pits into which slaughtermen might be tempted to throw manure and offal being the exception.

The whole question of slaughtering animals for human food can only be regarded as offensive if not even a filthy operation, and the first and great objection is that the structures generally, almost without exception, are too small for convenient work, so that when one animal has been killed, dressed, and cleaned, it is a practical impossibility to slaughter another without smearing and fouling the dressed carcase, by blood or manure, or both, from the next animal.

This state of things is intensified when a large number of animals are killed, and doubly so when the same premises are used by two or more persons, for it must be remembered that not one slaughter-house in the Borough is provided with a cooling room, into which every carcase could and should be removed immediately dressing is completed.

It is a pleasure to contemplate the action of the Town Council in deciding to provide a cooling-room for the nine oldest slaughter-houses which are under the charge of the Markets Committee, and it is to be hoped butchers owning private slaughter-houses will follow suit, and that where the separate cooling room cannot be provided, very special care will be taken to make fouling of the dressed meat impossible, and also to have the structures so far improved that all surfaces can be thoroughly cleansed and the meat allowed to cool under very much better conditions than exists to-day.

Two special points should be insisted upon throughout, viz.:— the removal of fasting pens and of every drain or gully to the outside of the slaughter-houses.

At the present time many of the fasting pens are entirely inside the slaughter-rooms, where animals are kept for hours, within hearing and smell, and in some instances actually witnessing the operations going on.

The fasting pens should be entirely outside, properly constructed, and, as they must of necessity open into the killing place, special care should be taken to have the floors sloping away from, and not into, the slaughter-house, as several do now.

Another item needing attention is the drainage of yard or premises, to prevent blood and washings passing out to the public street or passage.

Special notes, on each place inspected, have been made, not taking them in any order, so I will describe them individually by number, without specifically identifying any place, unless there are special considerations, when I would ask for your Committee, or a Sub-Committee, to make inspection before asking for reconstruction or any large alterations or improvements.

With a view to the better appreciation of the surroundings, I am also preparing tracings showing the position of each slaughterhouse with regard to approach, nearness to dwellings, workshops, etc., and I have also prepared, from records carefully compiled by me, and capable of verification, tabulated particulars of use, showing the number of changes that have taken place in tenancies during the past twenty years.

UNSOUND FOOD.

Condemned and Destroyed.

150 lbs. Apricots.
1314 lbs. Beef.
90 lbs. Black Currants.
847 lbs. Cod Fish.
744 lbs. Cat Fish.
70 lbs. Codling.
420 lbs. Cole Fish.
72 Ducks.
130 lbs. Fish Fillets.
84 lbs. Findon Codling.
54 lbs. Hearts (Beasts').
224 lbs. Herrings.
112 lbs. Haddock.
2 Hares.
1052 lbs. Kidneys (Hogs').
44 lbs. Kippers.
1992 lbs. Lungs, Liver, etc.
75 lbs. Lemon Soles.
8 Cases Lemons.
110 lbs. Mutton.
8442 lbs. Mussells.
400 lbs. Mackerel.
120 Mackerel.
224 lbs. Oysters.
36 lbs. Preserved Peas.
278½ lbs. Plaice.
226 lbs. Prawns.
1 Partridge.
864 Rabbits.
290 lbs. Raspberries.
296 lbs. Shrimps.
30 Pots of Shrimps.
3885 lbs. Strawberries.
48 lbs. Sprawns.
280 lbs. Sprag.
684 lbs. Tomatoes.
20 lbs. Whiting.
168 lbs. Watercress.

As in former years, much unsound food has been intercepted and destroyed, but it is some satisfaction to be able to report a decrease in the number of tuberculous animals slaughtered for human food.

During the past year, 15 heifers, 1 bull, 1 bullock, 40 cows, and 1 pig have been found suffering in varying degrees from the above disease, practically the whole of the cows having quite recently been giving milk.

In two instances the entire carcase of the cow had to be destroyed.

Food and Drugs Acts.

Samples submitted to the Borough Analyst (Mr. Otto Hehner).

Samples.	Article.	Genuine.	Adulterated.
8	Brandy	5	3
12	Butter	11	1
5	Gin	4	1
71	Milk	61	10
7	Rum	6	1
8	Whiskey	6	2
111		93	18

It is not pleasant to have to report that 16·21 per cent. of the samples taken were found to be adulterated, nearly double the percentage of the previous year.

Wilkinson v. Alton.

At the end of 1907, an appeal was pending to the High Court against the dismissal, by the Borough Magistrates, of a charge of delivering Margarine in unmarked wrapper.

The appeal was heard in the King's Bench Division on 6th April, 1908, before the Lord Chief Justice and Justices Ridley and Darling. The Lord Chief Justice, in giving judgment, said:—

"That they had to construe this somewhat peculiar Act of Parlia-"ment. Mr. McCardie had said everything it was possible to say, "but he was of opinion that the appeal must be allowed. The Act "of Parliament made it quite clear that everything prepared so as "to look like butter which was not butter must be called Mar-"garine, and, in face of the conversation which took place when it "was sold, could hardly have found otherwise. Taking the section "(which his Lordship read) and the facts found together, the point "did not admit of lengthened argument. The appeal must be "allowed." The other learned Judges agreed.

On this case being remitted to the Magistrates, they imposed a nominal fine of five shillings and costs, a second case for similar offence on the following day being withdrawn.

Offensive Trades.

The following are the offensive trades carried on within the Borough, and subject to inspection:—

Bone Boiling	1
Gut Scraping	1
Hide and Skin Marts	2
Parchment Works	1
Skin Curing	1
Soap Boiling	1
Tallow Melting	1
Tripe Boiling	6
Varnish Works	1
	15

The only Tannery which existed at the time of last Report has been closed during the year under review.

Visits, 77.

Notices, 6.

Defects Remedied, 20.

WILLIAM WILKINSON,

Chief Sanitary Inspector.

Borough Surveyor's Report, 1908.

Manholes Constructed during 1908.

Nottingham Road ...	1	Friary Street	1
Bramble Street ...	1	Derwent Street ...	1
John Street	1	Uttoxeter New Road ...	1
Kedleston Road ...	1	Monk Street	1
Duke Street	1	Curzon Street ...	1
Morledge	2	Trinity Street	1
Osmaston Road ...	3		
Becket Well Lane ...	1	Total ...	18
Twyford Street ...	1		

Sewers Cleaned out during 1908.

	Loads		Loads
Holcombe Street ...	93	London Road	1
Culverted Brookcourse.			
Porter Road	1	Railway Terrace ...	2
Litchurch Lane ...	5	Grove Street	1
Industrial Street ...	3	Yates Street	1
Chester Green Road ...	1	Watson Street	4
City Road	1	Nun Street	1
Monk Street	1	Whitecross Street ...	1
Russell Street	2	Exeter Place	3
Brighton Road ...	2	Trinity Street ...	13
St. Michael's Lane ...	1		
Vale Street	5		
Party Nook Lane ...	1	Total ...	144
Cavendish Street ...	1		

Manholes Cleaned out during 1908.

	Loads		Loads
Bass Street	1	Mansfield Road ...	1
Richardson Street ...	1	Slack Lane	1
Duke Street	1	Stockbrook Street ...	1
Osmaston Road ...	4		—
Friary Street	1	Total ...	12
Western Road ...	1		—

New Sewers laid during 1908.

Cotton Lane	9″
Russell Street	12″
Morledge	9″

In addition to these several sewers have been laid in new streets by private owners.

Water used during 1908.

	Gallons.
Sewer Flushing	6,049,720
Court Flushing	1,077,083
Street Watering	7,557,200
Steam Rolling	1,412,370
Cabstands, Bridges, and Wood Paving	204,400
Footways	30,800
Total ...	16,331,573

Disinfectant Powder used during 1908, One Ton.

Disinfectant Fluid used during 1908, 1,200 Gallons.

River Dredging during 1908, 89 Tons.

Markeaton Brook—Cleaning during 1908, 11 Tons.

JOHN WARD,
Borough Surveyor.

Appendix I

COUNTY BOROUGH OF DERBY.

Vital Statistics of Whole District during 1908 and previous years.

Year.	Population estimated to middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions.	Deaths of Non-residents registered in Public Institutions in District.	Deaths of Residents registered in Public Institutions beyond Dist.	Nett Deaths at all ages belonging to the Dist.	
				Under One Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births Registered.	Number.	*Rate.				Number.	*Rate.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1898.	102,448	2,860	28·0	484	169	1,830	17·9	197	74	No record.	1,756	17·2
1899.	103,649	2,984	28·8	488	163	1,856	18·0	310	81	nil.	1,775	17·2
1900.	104,684	2,900	27·7	504	173	1,932	18·5	342	78	...	1,854	17·7
1901.	106,076	2,939	27·8	455	155	1,673	15·8	304	75	...	1,598	15·1
1902.	116,869	3,326	28·5	417	126	1,698	14·6	290	59	...	1,639	14·1
1903.	118,707	3,215	27·1	411	128	1,671	14·1	309	75	...	1,596	13·5
1904.	120,449	3,282	27·3	467	143	1,905	15·9	346	81	...	1,824	15·2
1905.	122,207	3,108	25·5	471	152	1,823	15·0	336	79	2	1,746	14·3
1906.	123,981	3,103	25·1	359	116	1,829	14·7	370	99	3	1,733	14·0
1907.	125,774	3,152	25·1	384	122	1,870	14·9	400	88	2	1,784	14·2
Averages for years 1898-1907.	114,484	3,087	26·96	440	144	1,808	15·8	320	78	...	1,730	15·2
1908.	127,583	3,321	26·1	367	111	1,777	14·0	426	99	4	1,678	13·15

* Rates in Columns 4. 8, and 13 calculated per 1,000 of estimated population.

Note.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

Area of District in acres (exclusive of area covered by water) 5,272 acres.

Total population at all ages	114,848	At Census of 1901.
Number of inhabited houses	24,851	
Average number of persons per house	4·7	

Appendix II.

Vital Statistics of separate Localities in 1908 and previous years.

NAMES OF LOCALITIES.	WHOLE DISTRICT.				ABBEY WARD.				ARBORETUM WARD.				BABINGTON WARD.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	b.	c.	d.	a.	b.	c.	d.	a	b.	c.	d.	a.	b.	c.	d.
1898	102,448	2,860	1,756	480	...	...	...	...	...	...	263	93	...	...	199	50
1899	103,649	2,984	1,775	484	...	...	...	...	...	...	301	88	...	...	169	35
1900	104,684	2,900	1,854	503	...	...	...	...	...	...	311	91	...	...	185	36
1901	106,076	2,939	1,598	454	...	...	...	...	...	579	266	78	...	291	159	44
1902	116,869	3,326	1,639	417	8901	312	142	50	9045	230	110	25	8596	160	103	20
1903	118,707	3,215	1,596	406	9040	317	128	39	9186	188	110	30	8730	149	110	19
1904	120,449	3,282	1,824	467	9175	318	147	34	9324	206	104	22	8861	159	109	19
1905	122,207	3,108	1,746	467	9306	299	140	43	9459	199	120	24	8988	140	105	18
1906	123,981	3,103	1,733	351	9442	279	127	27	9596	182	99	18	9119	166	145	20
1907	125,774	3,152	1,784	377	9580	274	136	40	9735	193	110	14	9251	140	114	11
Averages of Years 1898 to 1907.	114,484	3,087	1,730	440	...	...	...	...	...	...	...	...	...	...	...	...
1908	127,563	3,321	1,678	367	9802	318	117	34	9810	192	124	27	9320	158	96	15

NAMES OF LOCALITIES.	BECKET WARD.				BRIDGE WARD.				CASTLE WARD.				DALE WARD.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1898	...	...	310	90	...	...	...	...	...	...	195	62	...	...	...	...
1899	...	...	334	88	...	...	...	...	...	...	204	47	...	...	...	...
1900	...	...	388	120	...	...	...	...	...	...	221	65	...	...	...	...
1901	...	607	296	88	...	...	...	...	...	210	168	49	...	...	...	...
1902	7425	165	110	17	5170	97	70	16	7924	257	149	39	4868	170	67	19
1903	7542	178	114	25	5250	122	61	13	8048	247	157	43	4944	183	72	22
1904	7655	156	97	22	5329	97	51	6	8132	264	169	56	5019	189	85	21
1905	7765	164	100	29	5407	113	101	27	8285	240	195	58	5092	200	82	22
1906	7877	150	88	22	5485	122	70	8	8405	226	143	36	5166	199	81	15
1907	7991	161	117	31	5564	135	68	9	8527	224	192	47	5240	219	84	18
Averages of Years 1898 to 1907.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1908	8024	140	110	24	5647	135	60	6	8640	259	157	43	5381	219	9	25

NAMES OF LOCALITIES.	DERWENT WARD.				FRIAR GATE WARD.				KING'S MEAD WARD.				LITCHURCH WARD.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1898	...	...	129	44	...	...	166	41	...	...	279	82	...	...	92	18
1899	...	...	134	45	...	...	218	59	...	...	301	87	...	...	114	35
1900	...	...	138	42	...	...	196	34	...	...	284	74	...	...	131	39
1901	...	230	133	27	...	391	169	45	...	392	295	93	...	139	112	30
1902	5020	165	66	22	8667	255	94	22	7188	218	177	46	8623	183	109	20
1903	5099	157	67	20	8802	235	109	30	7317	174	159	36	8754	161	97	13
1904	5176	168	94	26	8933	216	121	32	7426	213	169	43	8886	168	113	23
1905	5249	154	73	20	9061	198	118	35	7517	179	138	33	9017	145	104	15
1906	5325	131	76	16	9193	204	95	13	7626	173	146	33	9148	182	141	28
1907	5402	157	79	18	9326	219	114	25	7736	178	165	35	9280	156	106	16
Averages of Years 1898 to 1907.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1908	5493	155	73	14	9470	229	99	20	7793	187	136	30	9360	188	116	17

NAMES OF LOCALITIES.	MARKEATON WARD.				NORMANTON WARD.				OSMASTON WARD.				PEAR TREE WARD.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1898	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1899	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1900	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1901	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1902	7327	239	104	27	7351	266	83	23	5525	188	60	23	7053	222	93	26
1903	7441	243	96	27	7466	250	105	36	5611	213	55	10	7163	207	76	22
1904	7552	237	136	39	7578	280	104	30	5695	203	88	27	7270	219	102	33
1905	7661	204	114	32	7688	218	89	24	5777	201	53	23	7374	250	97	30
1906	7773	230	135	34	7800	215	86	14	5861	224	85	25	7480	274	109	22
1907	7885	219	122	34	7912	226	88	16	5945	195	65	20	7590	272	121	26
Averages of Years 1898 to 1907.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1908	8001	228	123	26	8082	250	97	17	6091	197	65	13	7789	286	106	30

NAMES OF LOCALITIES.	ROWDITCH WARD.				DEATHS IN INSTITUTIONS NOT RELEGATED TO WARDS.				STRANGERS.		
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	b.	c.	d.	a.	b.	c.	d.	b.	c.	d.
1898	...	...	...	...	...	...	...	...	...	...	4
1899	...	...	...	...	...	...	...	...	...	...	4
1900	...	...	...	...	...	...	...	...	...	...	1
1901	...	...	...	...	...	...	...	...	...	...	1
1902	8186	199	102	22	...	...	...	...	...	59	...
1903	8314	191	80	21	...	...	123	...	...	75	5
1904	8438	189	135	34	...	...	...	...	...	81	...
1905	8561	204	117	31	...	...	...	...	...	79	4
1906	8685	146	107	23	...	...	...	...	...	99	5
1907	8810	178	103	17	...	...	...	...	7	88	7
Averages of Years 1898 to 1907.	...	...	...	...	...	...	...	...	...	...	...
1908	8880	170	107	18	...	...	...	...	10	99	8

Note re-arrangement of Ward Boundaries for 1902. It is impossible to group the old arrangement so as to render them statistically comparable with the new arrangement.

COUNTY BOROUGH OF DERBY.

Appendix III.

Cases of Infectious Disease Notified during the Year 1908.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT							TOTAL CASES NOTIFIED IN EACH LOCALITY.																NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.																
	At all Ages.	At Ages—Years.																																						
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent. (H)	Friargate.	King's Mead.	Litchurch.	Markeaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch. (W)	Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent (H)	Friargate.	King's Mead.	Litchurch.	Markeaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch (W	Total.
Small-pox	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup) ...	670	...	126	460	47	37	...	39	43	40	33	15	46	33	79	48	11	38	27	36	73	69	40	16	9	22	12	7	21	12	12	7	8	16	7	10	21	31	13	224
Erysipelas...	120	2	7	8	15	71	17	5	7	10	8	6	9	7	7	8	6	10	8	8	4	11	6	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	..	...
Scarlet Fever	116	1	25	72	13	5	...	6	16	7	8	2	6	11	6	5	3	10	4	7	5	8	12	3	6	4	7	...	4	7	3	4	2	6	1	3	3	7	9	69
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
Enteric Fever	39	...	3	10	7	19	...	...	...	7	...	2	1	1	3	5	3	...	9	1	5	2	...	...	...	6	...	1	1	1	3	3	1	...	9	1	5	1	...	32
Relapsing Fever... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	15	...	...	...	3	12	...	2	1	1	...	...	2	...	...	1	1	...	4	2	1	...	...	...	...	1	...	...	...	...	...	...	...	...	3	1	...	...	...	5
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis ... . (Voluntary Notification)	108	...	4	8	22	73	1	2	5	3	3	6	11	5	6	9	18	5	14	1	10	6	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1068	3	165	558	107	217	18	54	72	68	52	31	75	57	101	76	42	63	66	55	98	96	62	19	15	33	19	8	26	20	18	14	11	22	20	15	29	39	22	330

(I) Derbyshire Royal Infirmary for treatment of Enteric Fever cases.
(H) Derby Borough Isolation Hospital for treatment of Diphtheria and Scarlet Fever cases.

COUNTY BOROUGH OF DERBY.

Appendix IV.

Causes of, and Ages at, Death during 1908.

Causes of Death.	Deaths in or belonging to whole District at subjoined Ages.							Deaths in or belonging to Localities (at all Ages).																Total Deaths in Public Institutions in the District.	Strangers.
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up-ward.	Abbey Ward.	Arboretum Ward.	Babington Ward.	Becket Ward.	Bridge Ward.	Castle Ward.	Dale Ward.	Derwent Ward.	Friargate Ward.	King's Mead Ward.	Litchurch Ward.	Markeaton Ward.	Normanton Ward.	Osmaston Ward.	Pear Tree Ward.	Rowditch Ward.		
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	20	2	18	...	...	...	...	1	...	2	2	1	...	4	...	3	3	...	1	3	...	...	...	1	...
Scarlet Fever	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	2	...
Whooping-cough	15	7	7	1	...	...	...	...	4	...	1	1	...	2	1	...	...	2	1	...	...	2	1	...	...
Diphtheria and Membranous Croup	36	...	15	20	1	...	...	...	4	2	3	1	1	1	5	...	...	2	2	4	4	6	1	18	1
Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric	4	...	...	...	1	3	...	...	...	1	...	...	1	...	1	1	...	...	...	...	...	...	...	4	1
Other Continued	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	34	2	...	4	...	17	11	1	3	2	1	2	6	1	1	2	2	2	2	5	...	4	...	1	1
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	57	52	4	...	...	...	1	9	1	1	3	2	7	4	1	3	4	5	4	3	2	6	2	1	...
Enteritis	22	1	6	3	...	5	7	2	2	3	5	1	1	1	1	1	...	2	...	...	2	...	1	8	3
Puerperal Fever	7	...	...	...	2	5	...	...	...	1	...	...	1	...	1	...	1	...	1	1	1	...	...	5	2
Erysipelas	2	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
Other Septic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)	115	1	2	1	17	91	3	2	9	3	8	7	10	2	5	12	18	7	6	5	5	7	9	22	4
Other Tuberculous Diseases	73	20	27	8	2	15	1	6	4	6	6	...	15	7	3	4	3	5	1	2	2	4	5	14	3
Cancer, Malignant Disease	107	1	1	...	...	68	37	6	8	5	6	8	11	1	4	6	4	9	11	11	7	7	3	32	11
Bronchitis	142	29	13	...	1	35	64	13	16	5	10	3	15	7	7	6	14	11	9	8	2	7	9	14	1
Pneumonia	67	19	14	3	1	24	6	6	2	7	6	...	6	5	3	1	7	5	4	4	3	2	6	14	2
Pleurisy	3	...	...	...	...	3	...	...	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Other Diseases of Respiratory Organs	11	3	1	...	...	4	3	1	...	1	5	...	...	...	1	...	...	...	2	...	...	1	...	3	1
Alcoholism, Cirrhosis of Liver	32	...	...	...	...	21	11	1	3	6	1	3	3	3	1	2	2	1	1	2	...	1	2	6	2
Venereal Diseases	3	2	...	...	...	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	3	2	1
Premature Birth	73	73	...	...	...	...	...	3	8	3	8	1	6	6	5	...	11	1	7	1	3	7	3	3	1
Diseases and Accidents of Parturition	8	...	...	...	2	6	...	2	1	...	...	...	...	...	1	...	...	...	1	1	...	1	1	5	1
Heart Diseases	187	4	6	8	2	90	77	15	13	16	14	9	10	13	4	14	14	14	10	8	8	10	15	31	5
Accidents	45	5	4	8	4	15	9	7	4	3	2	1	4	1	2	3	7	3	3	...	2	1	2	27	5
Suicides	11	...	...	...	...	11	...	1	1	1	2	...	3	...	...	...	1	1	1	...	...	...	...	...	...
Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other Causes	602	137	36	11	12	184	222	40	41	27	27	20	57	33	26	40	43	68	55	37	21	39	45	213	54
All Causes	1678	359	157	67	45	598	452	117	124	96	110	60	157	92	73	99	136	116	123	97	65	106	107	426	99
Non-Residents	99	8	8	8	7	55	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Appendix V.

Memorandum by the Medical Officer of the Local Government Board on Administrative Measures against Tuberculosis.

In this memorandum it is proposed to supplement from a medical standpoint the information contained in the circular letter issued by the Local Government Board, which was sent with the Public Health (Tuberculosis) 1908 Regulations to all Sanitary Authorities and Boards of Guardians.

The prevention of tuberculosis and the aid which can be given to patients suffering from it depend in large measure on knowledge of its pathology, and the earlier part of this memorandum deals briefly with this aspect of the question. Afterwards are set forth the chief administrative measures that can be taken against the disease, and the different forms of aid that can be given to the patient, either through administrative or voluntary agencies.

1.—*Scope of the Order and of this Memorandum.*

The Order deals only with those patients who come under the care of poor-law medical officers, either at home or in poor-law institutions. Such patients are often only temporarily within the scope of poor-law administration, though at other times they may still need help and supervision. Furthermore, public health administration, whether dealing with poor persons, as defined in the Board's Order, or with other patients suffering from pulmonary tuberculosis, is concerned with similar problems; though these problems are more acute, and help is more urgently needed in cases of poor relief than in other cases. In all cases alike, however, it will be wise to take measures to avoid the spread of infection, and with this object in view to educate and train the patient in the method of life suitable to his disease, to secure for him separate sleeping accommodation so far as circumstances permit, either at home, or in an institution, to disinfect rooms which have become infected, and to remove all conditions which favour infection or re-infection.

In a few towns, all cases of pulmonary tuberculosis are compulsorily notifiable under local Acts of Parliament. In a considerable number of urban and rural districts, voluntary notification of cases of pulmonary tuberculosis is invited by the sanitary authority and secured in some proportion of the total cases of this disease. The Board have always advised that the payment of reasonable fees for the voluntary notification of cases of pulmonary tuberculosis to the medical officer of health is within the powers of a sanitary authority.

As poor persons frequently pass outside the scope of the poor law, and as in many sanitary districts the Regulations as to Tuberculosis will be worked alongside of a system of voluntary notification of patients affected with pulmonary tuberculosis, but not in receipt of relief, it is convenient and desirable not to limit the scope of this memorandum strictly to poor patients.

2.—*Characteristics of Tuberculosis.*

Tuberculosis is an infectious disease caused by the tubercle bacillus. Its development is aided by defective nutrition and by other conditions unfavourably influencing personal health, and by insanitary circumstances of environment; but the indispensable element in its causation is the tubercle bacillus, and the disease can be prevented by avoiding infection. The knowledge that tuberculosis is caused by the tubercle bacillus gives importance to the bacteriological diagnosis of tuberculosis mentioned in paragraph 4. In this memorandum infection from human patients alone is considered, as this is chiefly responsible for the causation of pulmonary tuberculosis.*

Tuberculosis is not only a preventable disease, but it can also be arrested, especially in its earlier stages; and indeed the vast majority of those attacked by it recover.

The total prevalence of tuberculosis as indicated by mortality has already greatly declined. This decline has occurred under the influence of improved sanitation and higher social welfare. These improved conditions have acted by diminishing infection and by increasing the resistance of the population to infection. Thus the vastly increased treatment of advanced cases of pulmonary tuberculosis in infirmaries and other institutions has been most valuable in securing segregation of patients from their families as well as in securing humane treatment for the patients themselves. Diminution of overcrowding has diminished infection and increased the resistance to it; and other measures of sanitation and social improvement have acted either by increasing resistance to, or by diminishing the amount of, infection in the community, or usually by the combined influence of both these factors.

Degree of Infectiousness of Pulmonary Tuberculosis.—As an infectious disease, pulmonary tuberculosis differs in several important respects from most of the acute infectious diseases. Its infection is derived under ordinary circumstances from one channel only, that of the lungs, the infectious material being discharged as expectoration or as cough-spray. This mode of infection can be controlled by the patient with but little trouble, if he is intelligent and scrupulously careful; whereas in the acute infectious diseases constant isolation of the patient is usually needed to protect susceptible persons. Against the limited channels of transmission of pulmonary tuberculosis must be set its protracted duration. It may be infectious during months or even years, instead of only for a few weeks. This statement needs to be remembered in conjunction with the following facts: 1st, a tuberculous patient discharges tubercle bacilli in his expectoration only at intervals; and 2nd, the evidence clearly points to the conclusion that in most instances short exposure to infection does not suffice to infect healthy persons to an extent that will produce serious disease.

---

* Infection by bovine tuberculosis occurs chiefly by means of infected cows' milk, and can be avoided domestically by boiling milk. In France and Germany cows' milk is almost universally boiled.

These facts not only indicate that an exaggerated fear of infection in pulmonary tuberculosis is unnecessary; but they also emphasise the desirability of inculcating more exact knowledge as to the disease; and it is convenient to discuss at this stage the steps that can be taken to this end, although this discussion necessarily to a certain extent stretches into the province of administrative measures considered in later paragraphs.

3.—*Educational Measures against Tuberculosis.*

Tuberculosis has often been described as a *disease of misery*. This is true, in the main, because misery favours infection; to a less degree because it renders the patient a ready victim to infection. But tuberculosis is much more a *disease of ignorance*, and many of the measures for its treatment and relief—whether by home visits, dispensaries, or sanatoriums—if properly employed, have among their most valuable results the hygienic training of the patient.

Educational measures will naturally comprise means for instructing the members of the general community, those more directly exposed to the infection of tuberculosis, and those already tuberculous. It is unnecessary here to enlarge upon the importance of teaching hygiene in school life as an aid in the fight against tuberculosis. An active and valuable propagandism outside school life is rapidly diminishing the number of those *who do not know* and increasing the number of those *who know* the essentials of the pevention of tuberculosis, and is increasingly bringing the pressure of public opinion to bear against indiscriminate expectoration, and against overcrowding and other evils of housing and occupation. Much more could be done in these directions by special instruction of various social groups, trades unions, friendly societies, and so on, as well as in the army and navy.

It is more urgently necessary that special instruction should be given to those more directly exposed to tuberculous infection; and the value of notification is especially evident in this direction. Precise knowledge of the conditions under which tuberculosis is transmissible, of the channels of infection, and of means for appropriate disposal of expectoration, etc., are most desirable, if the relatives and attendants upon consumptive patients are to remain free from danger and free from an exaggerated fear of infection. More complete knowledge is the best means of preventing misapprehension. This knowledge should be possessed not only by nurses and relatives attending patients, but so far as practicable by those engaged in occupations in which tuberculosis is most rife, *e.g.*, among potmen, potters, cutlers, tin, lead or copper miners, bookbinders, printers, hairdressers, etc. Although cards of instruction are valuable, personal explanation by health visitors or others, when intelligently carried out, is much more efficacious; and opportunity may advantageously be taken as it arises to give collective instruction to nurses, to mothers, or to the members of friendly societies and other clubs, in the groups particularly affected by tuberculosis.

Instruction of the tuberculous patient is essential for the prevention of tuberculosis. Pulmonary tuberculosis being a disease of protracted duration, the institutional or domestic isolation of patients during the whole course of the disease is impracticable. No responsible administrator would contemplate such a possibility. The ideal to be aimed at is that, wherever the patient lives and works, his powers of infectivity shall be inoperative. This ideal is not likely to be realised unless specific instructions are given in such a way that they will become effective in the patient's life. Of the means to this end, temporary abode in a Sanatorium is probably the most effective (see paragraph 11). The habits of life thus initiated can be maintained by continued watchfulness and care under a private practitioner or in connection with a tuberculosis dispensary, and by the home-visiting of a competent and sympathetic health visitor or nurse (paragraphs 7, 8 and 9). They are most likely to be maintained if the desire for recovery and the conscientious determination to avoid infecting others are both brought to bear as motives influencing the patient's manner of life.

4.—*Early Diagnosis.*

Stress has been laid upon teaching the nurses and relatives of the consumptive patient. Except in so far as its is given as part of instruction to the general community, instruction of those about a patient can only begin when the nature of his disease has been recognised. For this among other reasons every facility for securing early diagnosis is an important means of preventing tuberculosis.

Among the most valuable of these is—

Bacteriological diagnosis by detection of tubercle bacilli in the sputum. Although pulmonary tuberculosis can be diagnosed before there is any expectoration if the patient on consulting a medical practitioner is examined with great care, yet in actual experience the provision of facilities for the gratuitous bacteriological examination of sputum is one of the most successful means of securing an earlier recognition of cases of this disease than would otherwise occur.

The medical inspection of school children will, it is hoped, secure the detection of previously unrecognised cases among school children.

Under present conditions a large proportion of the total cases of pulmonary tuberculosis remain unrecognised until either consolidation or cavitation of lungs has occurred and patients are approaching or have reached the period of complete disablement for work. In such cases there must already have been many opportunities for spreading infection. Happily, there is strong reason to think that usually only those who have been exposed to protracted infection become infected to an extent that produces serious disease; but it is, nevertheless, very important that the precautionary measures should be begun at an early period of disease, especially as this enables the patient himself to receive effective because early treatment.

The visits following notification of cases of pulmonary tuberculosis may not infrequently be made the means of securing early diagnosis of previously unrecognised cases in the same household. At this point, among others, voluntary and official agencies can join forces for the giving of hospital and dispensary letters to failing members of the affected household.

The conditions under which dispensary and hospital aid can be obtained are mentioned later (pars. 10, 11 and 12). They need to be considered at this point in relation to the facilities for early diagnosis. More effective preventive measures could be taken were every encouragement given for the systematic treatment of "persistent colds," repeated attacks of "bronchitis" and the like, which may indicate an early stage of pulmonary tuberculosis. The difficulties that the poor frequently experience in obtaining hospital out-patient letters and the delay involved in receiving skilled attendance at such institutions render it desirable for large communities to consider the need for a special tuberculosis dispensary at which every encouragemnt is given for the early diagnosis of disease. The organisation of such dispensaries is considered in paragraph 10.

5.—*The Medical Practitioner's position in relation to Preventive Measures.*

When a diagnosis has been secured, the first and most essential point is for the doctor in attendance, whether he be the poor-law medical officer or a private practitioner, to acquaint the patient with the nature of his illness. This is indispensable, if the active co-operation of the patient in regard to precautions is to be secured. It is equally necessary for the patient's own welfare, which depends in large measure on his intelligent carrying out of instructions. As the vast majority of cases of pulmonary tuberculosis recover when recognised early, and as life in more advanced cases can be prolonged by efficient treatment, there need be no hesitation in following this course.

The doctor will also consider whether, even though the particular case is not compulsorily notifiable, he will not be acting in the interest of his patient, as well as of the public health, to notify his case to the medical officer of health, under a voluntary system of notification.

Next must follow the giving of instructions to each patient and the disinfection of bedrooms, etc., when the need for this is indicated. Although the medical attendant may be able to give the personal instructions, it is none the less true that, under the usual conditions of medical practice, and particularly among the poor, supplementary aid is required to prevent infection and to secure the best arrangements for the patient's welfare.

It should be the aim of the medical officer of health to furnish this supplementary aid in a way that will secure the continued co-operation with him of the patient and of his medical attendant.

6.—*The Administrative Control of Tuberculosis.*

Incidentally some of the measures for the administrative control of tuberculosis have already been mentioned. The educational measures enumerated in par. 3 go far towards preventing the disease; and indeed every administrative measure is successful just so far as it secures enlightened precautions on the part of the consumptive patient.

Measures to secure early diagnosis, whether by bacteriological or other means, stand equally high as means of preventing the disease; for direct precautionary means—apart from scrupulous care respecting expectoration on the part of the entire population—can only be taken when a diagnosis has been made.

By providing information to the medical officer of health as to the presence of cases of pulmonary tuberculosis among the poor the Regulations as to Tuberculosis recently issued by the Board enable sanitary defects to be promptly remedied and those administrative measures of control introduced that are set out in this Memorandum.

Of other measures against tuberculosis, the most important are the investigation of cases of the disease, advice being given, disinfection and cleansing recommended, and spit-bottles supplied to the poor; the provision of dispensary or poor-law treatment of patients; the provision of sanatoria and of hospitals for advanced cases of disease.

These measures are, to a very large extent, also measures for aiding consumptive patients. The two objects cannot, in fact, be completely separated. The measures taken for preventing infection equally prevent the patient from receiving further doses of infective material, and he especially will gain by their success. That no strict line of demarcation can be drawn between personal and communal interests is further indicated by the fact that the community, by diminution of infection and by avoidance of loss of working ability, gains greatly when patients are cured, or when, apart from their cure, they are so housed that they cease to disseminate infection. Hence measures for the treatment of the individual patient cannot be left out of consideration in providing against the spread of the disease, any more than they can in the case of enteric fever. In both diseases the cure and the care of the individual patient are the most effective means of avoiding further cases.

7.—*Procedure in Official Investigations.*

When a notification of a case of pulmonary tuberculosis has been received by the medical officer of health, certain inquiries should follow. These inquiries should be made by the medical officer of health, or by a trained assistant, and the advice given at these visits should, as already indicated, be so given as not to interfere with advice already given by the doctor in attendance on the patient. The objection that the patient or his relatives on rare occasions make to the visit, can be met by indicating early in the interview the points in connection with which the patient can be helped, inquiries as to the previous or family history of the patient being taken up later, possibly at a second interview. By the exercise of tact and discretion, there seldom need be difficulty in obtaining all the information required for public health purposes, or in giving all the counsel that the patient and his family need. Above all, the investigator must not pursue inquiries in a manner or give information that may prevent a consumptive patient from continuing to earn his livelihood. His duty in this respect as a rule ends when he has advised as to the precautions to be adopted. This attitude does not prevent him from investigating, *apart from notifications*, the conditions under which consumptive patients work, and such investigations are sometimes indicated.

Re-visits should be made by an officer from the medical officer of health's department such as an inspector, health-visitor, or a nurse set apart for this work, who will encourage the patient in carrying out the treatment necessary for maintaining his ability to work, and the precautions needed to prevent infection. The results of these visits should be reported to the medical officer of health or to the attending physician (paragraphs 9 and 10) according to circumstances.

The Board's Regulations as to Tuberculosis provide for the medical officer of health obtaining information that shall enable him to keep in touch with consumptive poor-law patients when they change their abode. The Regulations also enable the medical officer of health to have infected premises cleansed and disinfected before they are occupied by new tenants. Incidentally also, the Regulations enable him to secure much more promptly than would ordinarily be practicable, remedial action in regard to insanitary conditions of dwellings, and particularly overcrowding under circumstances involving the specific danger of infection.

8.—*Action against Infection.*

The chief means for the prevention of infection in tuberculosis is the prevention of indiscriminate expectoration. For this purpose sanitary authorities having the necessary powers may advantageously make bye laws prohibiting spitting in public carriages, halls, waiting-rooms, or places of public entertainment; and the enforcement of such bye-laws, and the exhibition of notices warning against expectoration have a most beneficial influence.

The visit of the medical officer of health or of his assistant to the patient will be made the occasion for instruction as to covering the mouth when coughing, and as to the method of use of suitable handkerchiefs and of pocket spit bottles. The sanitary authority can provide such spit-bottles or other suitable means of preventing the spread of infection. Frequently such precautions have not been adopted in the past course of the case, and disinfection and cleansing of bedrooms will therefore be indicated. Such disinfection should always be carried out when the patient changes his address.

Continued spread of infection can be obviated if the patient will carry out the simple precautions indicated above, concerning which detailed advice should be given in each case. The patient's habits as to spitting are, however, often difficult to change. Hence the importance of the short training of patients in a sanatorium to which allusion is also made in paragraphs 3 and 11. At a later stage of illness difficulty in preventing infection arises from another cause. The patient is feeble and possibly bedridden; his cough is violent and his expectoration frequent and excessive; and under such conditions, in the home circumstances commonly prevailing among the poor, the avoidance of repeated and massive infection is difficult. It is at this stage that institutional treatment becomes a very important means of preventing infection (see paragraph 12).

It will be noted that, subject to not inflicting upon the poor person coming within the scope of the Board's Regulations as to Tuberculosis "any restriction, prohibition, or disability affecting himself, or his employment," etc., the Sanitary Authority can under these Regulations take all necessary measures for the disinfection or cleansing of infected articles and premises, as in the case of any infectious disease; for the safe disposal or destruction of infective material discharged by consumptive patients; for the proper use of sleeping apartments; and for furnishing any appliance, etc., that may help in preventing the spread of infection. These Regulations will enable the Sanitary Authority and its officers to minimise the risks of infection from poor-law patients caused by unguarded spitting and by improper use of sick rooms. There will, it is hoped, be little difficulty in securing the observance of the same precautions in respect of other than poor-law cases of pulmonary tuberculosis.

If the patient should continue to be treated at home, visits will be made at intervals by an officer attached to the medical officer of health's department, or in larger towns attached to a tuberculosis dispensary; and these visitors will encourage the patient to pursue the necessary regime, and to make regular visits to his doctor or to the centre for medical aid.

9.—*Home Training and Supervision.*

If the patient is treated at home throughout the whole course of his illness, it is much more difficult to secure his continuous adoption of the necessary precautionary measures than if he has had a short course of treatment and training in a sanatorium (see paragraph 11). To ensure this end requires conscientious perseverance on the part of the patient, and tactful advice and encouragement from the visitor sent as a result of notification. If the patient is in the charge of a family practitioner, the latter should be able to give much assistance. If the patient cannot afford to have a private doctor, the need for systematic medical assistance of some other kind arises. The patient may remain under the care of the poor-law medical officer, and in such cases it will not be difficult for the visitor to co-operate with him in the interest of the patient and of those about him. As a rule, however, poor-law cases of pulmonary tuberculosis, being most often cases of advanced disease, are preferably treated in the infirmary (see paragraph 12).

If the patient is treated at home under the care of a private practitioner, the visitor's work will be limited by the considerations advanced in paragraphs 7 and 8.

If the patient, although poor, is not a poor-law patient, but attends at intervals as an out-patient at a hospital or a dispensary, the visits he receives will advantageously be somewhat more frequent than when the patient is under the care of a private practitioner, and may be made helpful not only in advising the patient as to measures of personal hygiene and precautions against infection, but also in bringing him into relationship with the agencies for aid that his circumstances indicate as needed. Of these, the most important when completely organised is—

10.—*The Tuberculosis Dispensary.*

The object of this institution is to secure early diagnosis for patients suspected to be suffering from pulmonary tuberculosis, and to direct their treatment in the light of knowledge not only of their medical, but also of their domestic and industrial needs. The ideal of the dispensary implies, therefore, a careful system of domiciliary visitation and investigation.

Such visitation and investigation have already been recommended (pars. 7, 8 and 9), and it is evidently undesirable that visits to the same patient should be duplicated. When such a dispensary is already at work, arrangements can be made for nurses attached to the dispensary to visit the patients at home, and enter the information obtained by them on forms, which will subsequently be seen both by the dispensary physician and the medical officer of health. These nurses in some districts will be the health visitors of the sanitary authority, and in such cases the domiciliary work of the dispensary becomes a sub-department of the medical officer of health's work.

A well-organised tuberculosis dispensary becomes a valuable aid in securing more general notification of cases of tuberculosis; and its visitors can not only secure that domestic precautions are taken, but also that the patients are brought into touch with the different forms of domestic aid, or with the sanatorium or hospital treatment that the needs of the individual case indicate.

A tuberculosis dispensary is specially adapted for the needs of large towns. When local circumstances do not permit of its formation, similar work can be organised in connection with other dispensaries, and with the out-patient departments of hospitals, voluntary or official health visitors being employed, as circumstances permit. Whether a new organisation is started, or whether—as may sometimes be both economical and efficient—old organisations are modified and improved for the new work, the essential points are that the doctor when treating his patient shall have before him all the circumstances relating to the patient's manner of life likely to aid him in giving rational advice; that the patient shall receive help adapted to his social needs; and that there shall be no redundancy or lack of supervision and of the help requisite for the patient and for the protection of others against infection.

11.—*Sanatorium Treatment.*

Home treatment if depended upon alone often fails to prevent infection, besides failing to cure the patient. Hence the importance of sanatorium treatment when practicable. Under section 131 of the Public Health Act, 1875, the sanitary authority has power to provide such treatment for patients whether patients are in the receipt of relief or not.

Considerations of finance will need to be borne in mind, and it is to be remembered that thoroughly efficient sanatoriums for consumptives need not be built upon expensive lines. Before embarking on any large scheme each sanitary authority should consider what it can do with arrangements already available. Some sanitary authorities have found that in the intervals of epidemics empty rooms or wards of their isolation hospitals can be utilised for the treatment of pulmonary tuberculosis, and have taken action accordingly.

In rural districts it will be practicable by the use of temporary huts or tents, erected either at the patient's home or in the grounds of the infirmary or of the isolation hospital, to treat consumptive patients with minimum expense; in other instances private houses may be adapted as hospitals for the purpose; while in some circumstances contribution towards the cost of erection and maintenance of a sanatorium jointly with others may be the best course.

With regard to the use under regulated conditions of the wards of an isolation hospital for the treatment of pulmonary tuberculosis, experience has demonstrated that this can be done with entire safety to the consumptive patient and with great success in his treatment.

The sanatorium treatment of the consumptive may be directed towards the cure of the patient, or towards such amelioration of the patient and incidental training in desirable habits as may be practicable in a shorter stay than is required for his cure.

In considering the cure of the patient by sanatorium treatment, what has already been said as to early diagnosis needs to be borne in mind. In actual experience a large proportion of poor patients cannot be cured at the stage at which their disease is first recognised, without treatment which is so protracted and so large in amount when attempted for a large number of patients, as to be outside the range of present practical administration. Many such patients, however, either recover, or without complete recovery continue to be able to work indefinitely, even when protracted sanatorium treatment cannot be secured. Their working life can be extended and their capacity to spread infection can be stopped by an occasional stay in a sanatorium, of limited duration, say, for a month. It is on sanatorium treatment of this type for patients still able to work that stress may be laid. The patient usually does not lose his place by the short absence from work contemplated; he is willing to come into a sanatorium for such a short stay, when he would not accept more protracted treatment; and the improvement experienced during such a short stay in a sanatorium is often most remarkable. This, however, is not the only gain. When the patient enters the sanatorium his dwelling is disinfected; his relatives are relieved temporarily from a source of anxiety; and the patient while in the sanatorium is trained in the methods of disposal of sputum, and in the general hygienic regulation of his life in a practical manner that is scarcely possible at home. On his return home he is therefore no longer likely to be a source of infection, and the general hygiene of his home is almost certain to reflect the good influence of his stay in the sanatorium. From the standpoint of the sanitary authority a much larger number of patients can, in this way be treated and prevented from becoming a source of infection, than if permanent cure of the individual patient were made the only consideration.

12.—*The Institutional Treatment of Advanced Cases of Pulmonary Tuberculosis.*

A certain proportion of the total number of consumptives gradually deteriorate in health, notwithstanding every effort made on their behalf. The patients to whom this remark applies will diminish in number when they and the general public realise the importance of early and accurate medical recognition of the causes of failure in health, especially if accompanied by cough. Under present conditions, however, it is likely that a large number of cases of pulmonary tuberculosis will continue to occur that will remain unrecognised in the early stage of disease. It does not follow, as is too often and too hastily inferred, that the total amount of tuberculous infection cannot be steadily and even rapidly diminished. The number of cases of tuberculosis at any one time, so far as the disease is derived from other human cases of the disease, must depend on the total number of similar cases from which the infection of tuberculosis can be derived, and on whether the dosage of infection suffices under the conditions of its recipients to produce disease. Evidently then the occurrence of future cases of tuberculosis, even though these measures are not adopted early in each case, can be prevented in the proportion of the extent to which measures are adopted (*a*) for preventing the patient from scattering infection by cough and expectoration, and (*b*) for keeping the patient separate from those susceptible to infection. The first aim is secured by sanatorium and dispensary training and treatment and by home visiting and advice, with the co-operation of the patient; the latter aim can be secured by providing the patient with a separate bedroom and suitable nursing at home, and, when this is impracticable, by providing efficient hospital accommodation.

In the homes of the poor, it often happens that suitable bedroom accommodation cannot be provided for advanced cases of pulmonary tuberculosis, and that the wife or other relative in charge of the patient is overworked and thus rendered more easily a victim to the same infection. Hence, the medical attendance and nursing of a large proportion of the total advanced cases in hospitals must form an essential part of any effective scheme for preventing tuberculosis. It is to a very large extent a need already met; for though the provision of hospital beds for such cases has not, in the main, been made with any intention of diminishing the total mass of infection, it has operated in that way. Not only in general and special hospitals but on an immensely larger scale throughout the country, and especially in our towns and cities—in which domestic overcrowding is most marked, and in which the domestic nursing of cases of pulmonary tuberculosis is therefore most dangerous—consumptives have been treated in workhouse infirmaries, many of them under excellent conditions, and probably all of them under conditions less likely to cause spread of infection than the dwellings of the very poor and the destitute. Such arrangements need to be extended, and the hospital treatment of the bedridden consumptive in the ideal state will be made so popular that domestic infection will become much less frequent than at present.

In the preceding pages no attempt has been made to enumerate all the measures that can be utilised against tuberculosis. Nor has it been urged that when notification of cases has been secured and free bacteriological diagnosis provided, subsequent measures against the disease should be taken in any particular order. This will necessarily vary with local needs and local possibilities. The best work will be secured if there is active co-operation between voluntary and official workers and agencies; and this remark applies particularly in securing sanatorium treatment for patients. If all the measures within the range of practical action are adopted, there is no reason to doubt that by wise administrative effort following upon the Board's Regulations as to Tuberculosis, the decline in the number of centres of infection can be made more rapid, and thus can be secured a quicker decline in the death-rate from tuberculosis than has hitherto been experienced. Although, owing to the long duration and occasional long latency of this disease, results in regard to it cannot be measured with accuracy except after the lapse of a considerable number of years, it may confidently be expected that administrative measures will enable sanitary authorities gradually to bring tuberculosis under their control, and to secure that it shall become as much a disease of the past in this country as leprosy has become.

A. NEWSHOLME.

February, 1909.